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Montana

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MONTANA

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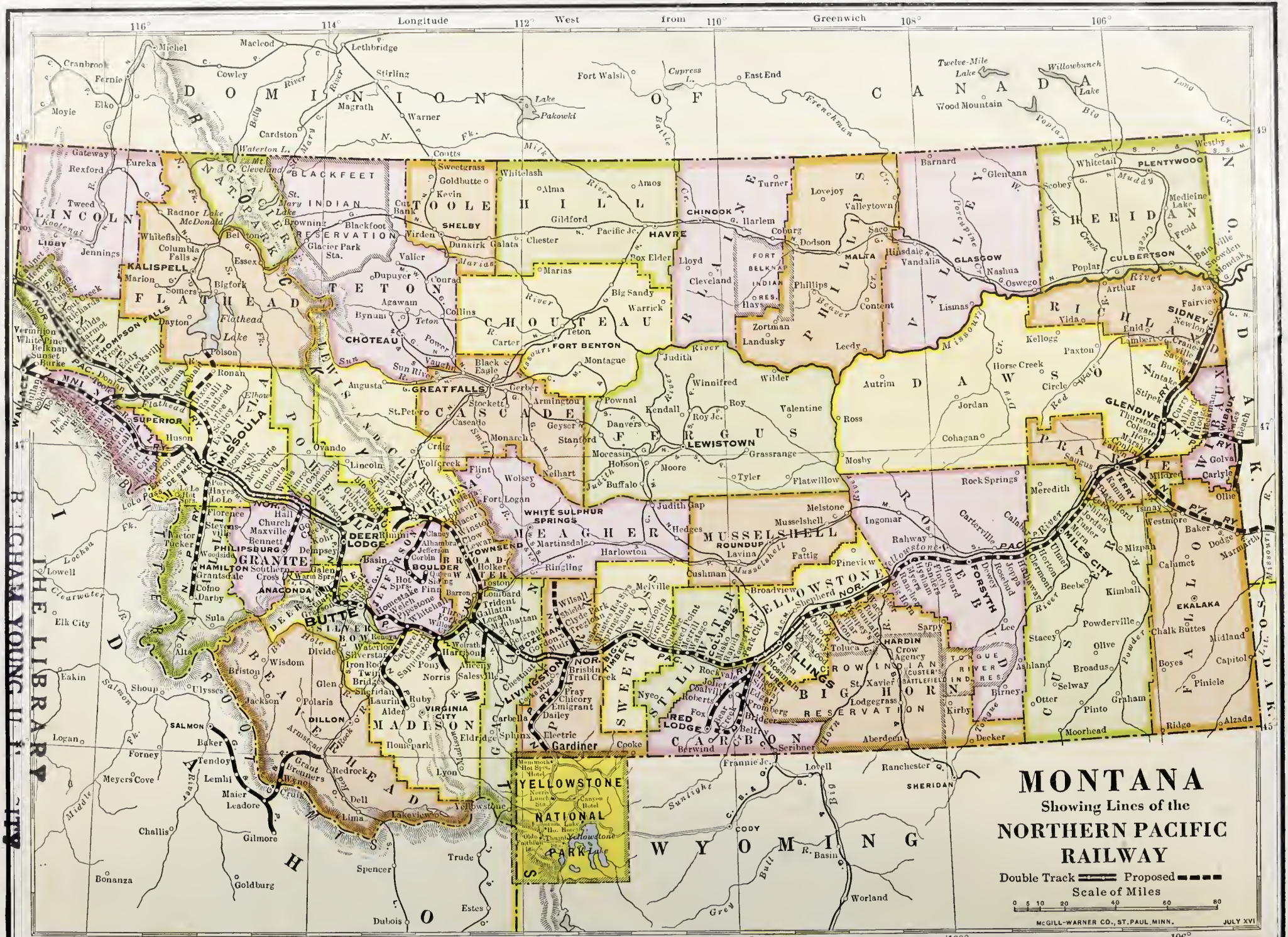
NORTHERN PACIFIC
YELLOWSTONE PARK LINE


MONTANA
Showing Lines of the
NORTHERN PACIFIC
RAILWAY
Double Track
Proposed
Scale of Miles
0 5 10 20 40 60 80
McGILL-WARNER CO., ST. PAUL, MINN.
JULY XVI
Longitude West from Greenwich
116° 114° 112° 110° 108° 106°
DOMINION OF CANADA
WYOMING
YELLOWSTONE NATIONAL PARK
LINCOLN
FLATHEAD
LAKE
MISSOULA
GRANITE
DEER LODGE
SILVER BOW
BUTTE
BEAVERHEAD
MADISON
GALLATIN
PARK
SWEET GRASS
STILLWATER
YELLOWSTONE
CARBON
BIG HORN
CUSTER
FALLON
DAWSON
RICHLAND
ROOSEVELT
SHERIDAN
VALLEY
PHILLIPS
BLAINE
HILL
TOOLE
PONDERA
TETON
CHOUTEAU
CASCADE
JUDITH BASIN
FERGUS
MUSSELSHELL
MEAGHER
WHEATLAND
GOLDEN VALLEY
PARK
CARTER
POWDER RIVER
TREASURE
ROSEBUD
YELLOWSTONE
BIG HORN
CROW INDIAN RESERVATION
BLACKFEET INDIAN RESERVATION
FORT BELKNAP INDIAN RES.
TONGUE RIVER INDIAN RES.
CUSTER'S BATTLEFIELD
GLACIER PARK
Kalispell
Libby
Thompson Falls
Superior
Missoula
Hamilton
Philipsburg
Anaconda
Butte
Dillon
Salmon
Virginia City
Deer Lodge
Boulder
Townsend
White Sulphur Springs
Great Falls
Choteau
Fort Benton
Havre
Shelby
Chinook
Harlem
Malta
Glasgow
Culbertson
Plentywood
Scobey
Whitetail
Sidney
Glendive
Wibaux
Baker
Miles City
Forsyth
Hardin
Billings
Red Lodge
Columbus
Livingston
Bozeman
Gardiner
Cooke
Big Timber
Roundup
Lewistown
Harlowton
Judith Gap
Melstone
Ingomar
Rock Springs
Meredith
Terry
Fallon
Ekalaka
Alzada
Ridge
Moorhead
Decker
Sheridan
Ranchester
Frannie Jc.
Lovell
Cody
Basin
Worland
Thermopolis
Shoshone
Ulysses
Eakin
Wisdom
Jackson
Polaris
Dell
Lima
Lakeview
Yellowstone
Gilmore
Leadore
Maier
Lemhi
Tendoy
Meyers Cove
Baker
Logan
Forney
Salmon
Challis
Bonanza
Goldburg
Spencer
Trude
Dubois
Estes
Grey Bull
Sunlight
Big Horn
Middle Fk.
Salmon
Clearwater
Lochsa
Lolo Pass
Elk City
Alta
Sula
Darby
Cofino
Lowell
Florence
Stevensville
Tucker
Hamilton
Grantsdale
Woodside
Philipsburg
Granite
Drummond
Garrison
Avon
Helmville
Ovando
Seeley
Superior
Huson
Wallace
Mullan
Pac. Div.
Mont. Div.
Yellowstone Div.
Nor. Pac.
Mo. Riv. Div.
Big Blackfoot R.
Flathead R.
Clark Fk.
Bitterroot R.
Missouri R.
Yellowstone R.
Musselshell R.
Judith R.
Milk R.
Marias R.
Sun R.
Teton R.
Powder R.
Tongue R.
Big Horn R.
Little Big Horn R.
Rosebud Cr.
Lodge Grass
Crow Agency
Custer's Battlefield
Pryor
Huntley
Park City
Laurel
Joliet
Roberts
Fromberg
Bridger
Belfry
Scribner
Aberdeen
Pinto
Graham
Olive
Powderville
Stacey
Ashland
Broadus
Selway
Otter
Kirby
Birney
Lee
Toluca
Sarpy
Custer
Pineview
Fattig
Lavina
Ryegate
Harlowton
Judith Gap
Hedges
Martinsdale
Ringling
Cushman
Melville
Wilsall
Shields
Clyde Park
Trail Creek
Livingston
Bozeman
Gallatin
Logan
Manhattan
Belgrade
Gordon
Muir
Timber
Big Timber
Rapelje
Reed Point
Absarokee
Nye
Columbus
Park City
Rockvale
Coalville
Laurel
Yellowstone
Custer
Big Horn
Hardin
Crow Agency
Lodge Grass
Custer's Battlefield
Pryor
Huntley
Billings
Broadview
Shepherd
Worden
Acton
Ballantine
Huntley
Custer
Big Horn
Yellowstone
Rosebud
Forsyth
Miles City
Colstrip
Rosebud
Birney
Ashland
Broadus
Powderville
Stacey
Olive
Selway
Otter
Kirby

CORN GROWN ON YELLOWSTONE VALLEY LANDS

OF NORTH DAKOTA

Montana—The Treasure State

A Bit of History

THE eastern part of Montana was in the Louisiana territory which was ceded to the United States in 1803, and the western part was in the Oregon territory which was saved to the United States largely through the discovery of the Columbia river by Captain Robert Gray in 1792. Lewis and Clark passed through the state from east to west in 1805 on their journey of exploration to the Pacific, and from west to east on their return in 1806. After them came explorers, missionaries—of particular interest to Montana being Fathers De Smet and Ravalli—trappers and fur traders, but there were only a few whites in its vast area until large numbers were attracted by the discoveries of placer gold at Gold Creek, Bannack, and Virginia City, 1858-65. This influx of population caused the creation of Montana territory in 1864. The first industry was mining of placer gold. Some of the gulch diggings were marvelously rich, Grasshopper, Alder, Last Chance, and Confederate gulches being the most productive. Those were flush times in Montana. As the placers became exhausted many restless spirits moved away. Farming and stock raising started soon after the gold discoveries. Quartz mining was developed somewhat later. Gold and silver mines were very productive. Then followed, at Butte, the beginning of copper mining, destined in a few years to attain vast proportions. Meanwhile settlements of stockmen and farmers were extended. Hostile Indians roamed the plains and were not subdued until after the Custer campaign and the disastrous battle on the Little Big Horn, in 1876.

The pioneer period may be held to include all the years previous to 1883 when the Northern Pacific Railway was completed.

This railway was completed across the continent September 8, 1883, and the event was celebrated by impressive ceremonies at the point where the last spike was driven, between Garrison and Gold Creek. July 4, 1883, was a gala day at Helena, where the people assembled in thousands to welcome the arrival of the first regular train and to witness the departure of the first bullion train. The latter consisted of thirty-six new box cars and bore the inscription "1,000,000 Pounds Gregory Bullion, from Helena, Montana."

In 1879 the railway mileage in Montana was nothing. In 1915 it was about 4,500 miles, and the increase in railway mileage measures the growth of the state.

THE MONTANA STATE CAPITOL, HELENA

Montana River Systems

Montana is generously watered and the advantages it possesses in its admirable river system cannot be too highly estimated. The rivers rise in the highest mountains, some peaks of which reach a height of more than 11,000 feet, and flow to the borders of the state, where the elevation is about 2,000 feet. The great rivers of the state are the Missouri and the Yellowstone, which drain the eastern and the Clark Fork of the Columbia, which drains the western part of the state. These streams have innumerable tributaries. The Missouri, which drains more than two-thirds of the state, is formed at Three Forks, Gallatin County, by the union of the Jefferson, Madison and Gallatin rivers. The Missouri first flows north, then east through the central northern part of the state into North Dakota, where it receives the waters of the mighty Yellowstone near the boundary line.

The three forks which form the Missouri are large rivers. The Gallatin rises in the Gallatin range, in and north of Yellowstone Park, and flows through the Gallatin Valley, a section of marvelous fertility. The Madison also rises, principally, in the Yellowstone Park and flows through the upper and lower Madison valleys. The Jefferson, naturally the largest of the three streams, is formed by the junction of the Ruby, or Passamari, the Beaverhead, and the Big Hole, or Wisdom rivers, near Twin Bridges, and it has an important affluent from the north in the Boulder river, which drains a large part of Jefferson County. The valleys of the Jefferson, Ruby, Beaverhead, and the Big Hole basin are noted places within the area drained by the Jefferson and there are many fertile valleys of smaller size.

The Yellowstone river drains the southeastern part of the state and carries a very large volume of water. Important tributaries entering from the south are the Powder, Tongue, Rosebud, Big Horn, Clark's Fork, Stillwater, and Boulder rivers, and from the north the Great Porcupine, Sweet Grass, and Big Timber creeks and Shields River.

The drainage of the western part of the state is into the Pacific ocean through the Columbia river, into which flow the waters of the Clark Fork of the Columbia. This section abounds in fine streams having their sources among the mountains, among which are the Bitter Root, the Deer Lodge, the Big Blackfoot, the Hellgate, the Missoula, the Flathead, all having numerous affluents.

There are many small and beautiful lakes in Montana, but Flathead Lake is the only one of great size. It is in extreme lines, 33 miles long and 15 wide, covering an area of about 360 square miles. It is navigable and a steamer makes regular trips between Somers and Polson at the extreme north and south ends of the lake. Polson is now reached, during the season of navigation, by stage coach or automobile from Ravalli on the Northern Pacific Railway. There are good roads also from Dixon, on the

railway, across the reservation. In 1917 a branch line of the Northern Pacific Railway, now under construction, will be completed from Dixon to Ronan and Polson. This is the Flathead reservation country which, in 1909, was opened to settlement and is a very fertile and beautiful region.

Farm Conditions in Montana

By Prof. A. Atkinson

Montana, the third largest state in the United States, has an area of 93,000,000 acres. This is approximately one twentieth of the area of the United States. It is nearly three times as big as Iowa and could hold within its borders the following eastern states: Maine, New Hampshire, Vermont, Rhode Island, Connecticut, Massachusetts, Marlyand, Delaware, New Jersey, New York and two-thirds of West Virginia. The population of Montana as reported by the 1910 census was 376,053, which is an average of less than three persons to the square mile. In the eastern states mentioned there is a population of 20,500,000, or 142 to the square mile. These figures suggest that Montana is the state toward which the home seeker ought to look. It has everything necessary to a great commonwealth except population.

The Crop Growing Conditions

In considering the possibilities of any state the homeseeker is chiefly interested in the soil and climatic conditions. The questions commonly asked are, is the soil high in fertility and is it easily worked? What about the climate? Is there sufficient rainfall and are the summers long enough to insure the development and ripening of crops?

Regarding the soil conditions, it is only necessary to point out the natural conditions to show a high state of productiveness. For many years Montana has been famous as a grain and stock growing state. The native grasses grow abundantly and are of the very richest quality. A comparatively light rainfall has prevented the loss of plant food through leaching and the plant food content of the soils is high. Many farms in the older settled communities of the state have produced from forty to fifty profitable grain crops on the same field year after year, wholly without the addition of commercial fertilizer and in most cases without even applying barnyard manure. This shows the strength of the soil.

There is much difference in the soil of various places in Montana, but there is comparatively a small area which will not produce some useful plant growth. Generally speaking, the soil throughout Montana is rich in the primary elements of fertility; it has not been impoverished by leaching caused by constant rains; and the climate is favorable for the growth and ripening of any crop that will mature in any part of the United States north of the Potomac river. Nearly every product of the soil that can

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MORTGAGE LIFTERS, RIVERSIDE RANCH, TOSTON, MONTANA

be grown in the Eastern, Middle, or Western states is successfully cultivated in Montana and in most instances, as the crop statistics show, yields much more abundant harvests.

One reason for the luxuriance of the crops grown in Montana in a comparatively short growing season, is that the percentage of sunshine is so great in Montana. The percentage of sunshine received throughout the upper and central Mississippi valleys is said to be about 45 per cent of the possible amount, while in Montana this percentage rises to 60 per cent or above. Other conditions being equal it is obvious that that plant will make the best progress and development which receives the greatest amount of sunshine. And another reason is that while the rainfall is small it usually comes when it is of most service.

The Climate

Turning to a consideration of the climate, it might be pointed out that general farming is carried on in Montana under two conditions. These are irrigation and non-irrigation, or dry farming. The early settlers, believing that crops could not be raised without the addition of water to supplement the natural rainfall, established irrigation systems. The state is very fully watered and canals were taken out to convey water to the growing crops. In 1910 there were 1,679,084 acres of land under irrigation in Montana.

Through all the years since the settlement of Montana began, a few farmers have been raising crops without irrigation. These crops were raised on land above the irrigation canals under what is called a dry farming system. This does not mean that the crops were raised without water, but it does mean that they were raised without the addition of irrigation water.

Commencing about 1905 homeseekers began coming to Montana more rapidly than they had formerly. These newcomers, many of them, could not find irrigated land at prices which they were prepared to pay, and they settled on the open land which had to be farmed without irrigation, or dry farmed. At the present time there is much more land dry farmed than irrigated in Montana. In 1915 there were over three-quarters of a million acres in winter wheat, all grown under the dry farming system. As many of the other crops are also grown without irrigation it is seen that there is much dry farming being carried on in Montana.

Dry Land Farming

The importance of dry land farming in the development of Montana is recognized by all. Two valuable publications have been issued by the Montana Agricultural Experiment Station at Bozeman, on this subject. One is "Dry Land Farming and Kindred Topics," being Montana Farmers' Bulletin No. 1, and

the other "Dry Farming Investigations in Montana," being Bulletin No. 74, of the Montana Agricultural Experiment Station. Experiment Station authorities will answer inquiries concerning the application of this method of cultivation to Montana soils and climatic conditions.

The successful cropping of the farming lands in the arid and semi-arid regions of the United States is by no means a new question. In Montana, dry land farming has been carried on for years in a few sections. In Flathead County is probably the largest area of land cropped without irrigation in the state. In Gallatin County, at the foot of the Gallatin and Bridger mountains, and in other portions of the state, very successful results were obtained by dry land methods of farming before the subject became one of general public interest.

The Rainfall

The rainfall in Montana varies considerably in different localities. The range is from twelve to twenty-two inches with an average of approximately fourteen inches for the entire state. The distribution of this is favorable in that nearly sixty per cent of the moisture comes during the months of April, May, June and early July. The June rainfall is usually greater than that of any other month, being from one and a half to five inches. This is most favorable for crop growth.

Another factor that has an important bearing upon the relation of the rainfall to the crop possibilities of Montana is the relatively low natural evaporation. Statistics by the United States government show that the evaporation in southern Kansas and Texas is nearly twice as great as in Montana. The exact figures are twenty-eight for Montana as compared with fifty-five for the southern states mentioned.

Temperature

The temperature conditions prevailing in Montana are most favorable for crop growth. At Miles City in eastern Montana the date of the last spring frost is May 7th and of the first fall frost September 30th, giving a frost free period of 146 days on the average. At Helena in central Montana there is an average frost free period of 147 days, extending from May 6 to September 30th. In western Montana at Missoula the last spring frost comes May 15th and the first fall frost September 25th, giving 133 days frost free on the average. These periods are sufficient for crop maturity.

There are no fogs, no malaria in Montana, and contagious and infectious diseases are rare, and when manifested prove, usually, to have been brought in from less favored states, and here they yield readily to professional treatment. The winter season is not one of continued cold; when the frigid breezes of

PRIZE HOLSTEIN FROM THE POPE FARM, NEAR GLENDIVE

AN EASTERN MONTANA ROAD, NONE BETTER

Canada are directed over the state the thermometer will drop below zero, but these cold periods are infrequent and of short duration, owing to the prevailing soft chinook winds. And when a cold wave does sweep in from the east or north, it is not severely felt, as the atmosphere at such times is almost entirely free from chill of moisture, and one does not feel twenty degrees below as severely as zero and above is felt in the eastern states. Cyclones and tornadoes are not known in Montana. Spring, summer, autumn and winter are all enjoyable and healthful seasons. In mid-summer the middle of the day is hot, but not uncomfortable, and as the sun declines the cooling air of the mountains displaces the heated air, leaving the evenings and nights delightfully cool and refreshing.

A Government report on the climate of Montana contains the following:

"The light snowfall in the valleys throughout the state during the winter months is usually speedily evaporated by the chinook winds which are prevalent from Oregon to Nebraska, from the Peace river to Arizona, being particularly common in Montana, where they do much to modify the climate."

The chinook is a wind that tempers the climate in all the country it reaches. There are cold days in Montana, as are to be expected in every northern state, but a cold "spell o' weather" usually lasts only two or three days at a time, and outdoor work during the winter months is seldom prevented by the severity of the cold.

The Crops

To briefly present the amount and value of the leading crops being produced in Montana the following table has been prepared from figures given by the United States Department of Agriculture. These are for the year 1915 and show that there has been a marked increase over previous years.

Crop Figures for 1915

(As reported by the United States Department of Agriculture)

	Acres	Yield per Acre	Production	Farm Value
Winter Wheat	675,000	27.0	18,225,000	$14,216,000
Spring Wheat	600,000	26.0	15,600,000	12,168,000
Oats	600,000	52.0	31,200,000	9,984,000
Barley	80,000	34.0	2,720,000	1,306,000
Flax	180,000	10.5	1,890,000	3,213,000
Corn	70,000	28.0	1,960,000	1,352,000
Potatoes	39,000	155.0	6,045,000	3,022,000
Rye	10,000	22.5	225,000	146,000
Total	2,254,000	.....	77,865,000	45,407,000

One significant fact shown by the figures of the United States

Government is the high average yield of crops grown in Montana. The table below shows this comparison. These figures give a fair estimate of the superior crop growing conditions in Montana as compared with the rest of the United States.

	Bushels to the Acre in Montana	Bushels to the Acre in United States
Winter Wheat	27	19
Spring Wheat	26	12
Oats	52	30
Barley	34	25
Corn	28	26
Potatoes	155	109
Rye	22.5	17

The Quality of Montana Grains

A brief statement of the winnings at leading expositions awarded to Montana grown grains will show the high quality of the grains raised. The Grand Prize for Grains at the Panama Pacific Exposition at San Francisco in 1915 was awarded to Montana. This was in competition with the other states and nations of the world.

Thirteen out of a possible forty-three Grand Championship Prizes were won by Montana exhibitors at the National Corn Exposition at Dallas, Texas, 1914. This was in competition with thirty-seven other states and the Dominion of Canada.

Sweepstake prizes on wheat, oats, barley and alfalfa were won at the Madison Square Garden Grain Show at New York in 1911. Sweepstake prizes were also won at the Northwestern Land Show in St. Paul, Minnesota in 1911; at the same show in Minneapolis in 1912; at the Dry Farming Congress and Exposition at Tulsa, Oklahoma in 1913, and at Spokane Washington.

Winter Wheat

The production of winter wheat in Montana has increased rapidly during the past seven years. Previous to 1909 the amount of winter wheat raised in the state was so small that it was not reported by the United States Government. Commencing with 1909 the production of winter wheat has been reported as follows:

Year	Bushels Reported
1909	6,012,000
1910	6,270,000
1911	7,259,000
1912	11,638,000
1913	12,288,000
1914	11,063,000
1915	18,225,000

MILES CITY, MONTANA, ON THE NORTHERN PACIFIC RAILWAY, IS ONE OF THE GREATEST PRIMARY HORSE MARKETS IN THE WORLD

BUTTE, THE GREAT MINING CITY OF THE WORLD AND A STEADY MARKET FOR MONTANA LAND PRODUCTS

The High Yield by the Acre

The average yield of winter wheat in the United States for the years 1909 to 1914 was 15.7 bushels an acre. In Montana for the same period the average yield was 26.7 bushels an acre. In 1909 the average yield in the United States was 15.8 bushels, while the report for Montana shows 32.5 bushels. The final report on the 1915 yield is not yet available, but it is evident that it greatly surpasses the general average.

In 1915, Mr. H. J. Miller, of Livingston, Montana, raised 2,933.04 bushels of Turkey Red wheat on 39.4 acres, an average of 74.4 bushels an acre for the entire tract. In this instance the land and crop was carefully measured by competent and disinterested persons and the yield was furnished in sworn statement.

On the Demonstration Farm conducted by the Montana Experiment Station, near Forsyth, in eastern Montana, the average yield of Turkey Red fall wheat was 37.3 bushels an acre on the average of the four years 1907 to 1910. This is reported in the Montana Experiment Station Bulletin No. 83. In 1907 the wheat on this farm yielded 58.2 bushels an acre.

In 1915 there were over three-fourths of a million acres planted in winter wheat in the state of Montana. While this is a substantial increase over the crops of previous years, it is only a beginning toward utilizing the millions of acres that await the settler. Land may be purchased at figures so low that one fair wheat crop on considerably less than the entire farm will more than meet the original cost.

Comparative Farm Land Values

It is often stated by those who are not familiar with the facts, or who have given the matter only superficial thought, that farm land values in Montana are too high; but comparative analysis of authoratative facts compels an entirely contrary deduction—that Montana farm lands are being sold at bargain-counter prices.

Taking into consideration the productivity of the lands, both in quantity an l value, and using the average yields of cereals as given by the Year Book of the Federal Department of Agriculture, it is found that in yield per acre of wheat, Montana leads Ohio by 66⅔ per cent, Illinois by 40 per cent, Michigan by 41 per cent, Iowa by 43 per cent, and the United States by 78.8 per cent. In yield per acre of oats, Montana leads Ohio by 22 per per cent, Illinois by 28 per cent, Michigan by 24 per cent, Iowa by 28 per cent, and the United States by 31 per cent.

In yield per acre of barley, Montana leads Ohio by 22 per cent, Illinois by 16 per cent, Michigan by 28 per cent, Iowa by 26⅓ per cent, and the United States by 27 per cent.

In the states mentioned, unimproved farm lands are valued at about $100 an acre, and with average development, from $150 to $200. In Montana, unimproved farm lands, well located as to

market facilities, etc., are selling at from $20 to $30 an acre, and improved farms at from $40 to $60 an acre.

A 160-acre farm in Illinois is valued at about $25,000. If planted to wheat, the cash value of the crop will be $2,832; if planted to oats, $2,696; and if planted to barley, $3,394.

A 160-acre farm in Montana, with equal advantages as to proximity to local market, etc., is valued at about $6,500. If planted to wheat, the crop value in cash will be $4,064; in oats, $3,456; in barley, $3,340.

Basing the value of a Montana farm on the percentage earned by the Middle States farm, using the average of the crops quoted, the Montana farm has its going value raised from $6,500 to about $27,625.

Aside from the crops mentioned and contrasted to prove the relative farm values, is the fact that the miscellaneous products of the Montana farm are worth much more money than in any of the states mentioned, for the reason that Montana farmers have the largest and highest priced home market for butter, cheese, poultry, eggs, vegetables, hay, etc., afforded by the well-paid laborers of the mining and lumbering areas of the state, who are large consumers and wholly non-producers of everything they consume.

Oats

The rich soils, cool nights, and bright days combine to produce unusually high grade oats. A study of this by the Montana Experiment Station shows that on the average, Montana grown oats have better quality than oats raised in most other sections of the United States. The amount of hull, which determines the quality of oats, runs about thirty per cent in average varieties over the country. On Montana grown oats the percentage of hull was found to be 24.5 on the average of a large number of varieties studied. This means that for every hundred pound of oats raised there is over five pounds more available material and less hull than on the average oats of the country.

Oats are successfully grown in all parts of the state under non-irrigated and irrigated conditions. Where irrigation is practiced enormous yields are harvested. A forty acre crop raised by John M. Robinson, of Bozeman averaged 146 bushels to the acre. The grain harvested and the acreage in this field was measured and attested by disinterested witnesses.

In 1915, Montana farmers raised 31,200,000 bushels of oats from 600,000 acres. This gives an average yield of 52 bushels to the acre. This yield, it will be noted, is far above that of the United States as a whole. The 1914 Year Book of the United States Department of Agriculture shows the following average acre yield for oats for Montana:

Year	Bushels to an Acre, Montana	Year	Bushels to an Acre, Montana
1905	41.3	1910	38.0
1906	43.2	1911	49.8
1907	49.0	1912	48.0
1908	41.6	1913	43.5
1909	51.3	1914	35.0
Ten year average			44.1
Ten year average for United States			29.6

Considering these yields, which are the average of all the oats raised in the state, we see the profitable possibilities of raising oats on land that costs only a fraction of the price of land in the Central West.

Barley

In 1915 Montana produced 2,720,000 bushels of barley, with an average of 34.0 bushels an acre. The high quality of brewing barley raised in Montana has been generally recognized and repeatedly demonstrated at national and international exposition. At the St. Louis Exposition in 1904, the sweepstakes award for brewing barley went to Montana. At the National Corn Exposition at Dallas, Texas, in 1914, the sweepstakes for barley was again awarded to a Montana grower. The rich soils and the bright clear days at ripening time combine to make a quality unsurpassed.

Peas

The raising of seed peas to supply planters who grow for the canners' trade is quite an important industry in sections of Montana. Canners have found the quality of Montana raised seed peas to be very superior, and the total absence of the pea weevil makes the state almost ideal for the raising of this crop.

Aside from the demand by canners, peas are generally raised as stock food in mixtures with oats for silage, for pasturing off in the field, for feeding when cut green and cured as hay, or, as a thrashed grain, peas are successfully grown and quite generally used in Montana.

Flax

In point of flax production Montana stood third among the states, with 2,560,000 bushels in 1914. This crop is being handled most intelligently in Montana, and the handicaps from disease and from pests that have cut down the flax returns in other states have been largely avoided by Montana growers. As a sod crop it has proven profitable for the homesteader and has done much to insure substantial returns for the first year's work by the new settler. The yield in 1915 was at the rate of 10.5 bushels an acre.

The following extract from a press bulletin fits in here very nicely.

Billings, Mont.—A gross return of more than $3,400 from 97 acres of flax, or a fraction more than $35 an acre, was realized by Jesse Marsh, who grew the crop on non-irrigated bench land near Hysham. The total yield was 2,370½ bushels, which, at $1.40 a bushel, means a gross revenue of $3,418.70. The flax was seeded on bench land adjoining the Yellowstone Valley, which had been prepared in the regulation, scientific, dry farming method, and the success of Mr. Marsh is an evidence of what may be realized by all farmers of Montana and adjoining states, who practice correct methods of cultivation where irrigation is not possible.

According to reports received, many farmers of eastern Montana and northern Wyoming will give special attention to flax growing in the future.

Corn

The experience of corn growers in the northern and western

PORTLAND CEMENT WORKS, TRIDENT, MONTANA

states during the past ten years has radically changed the general notion of the limits of the corn belt. Formerly it was considered that corn could be profitably grown in seven or eight Central states only. Now it is being recognized that the corn crop has marked ability to adapt itself to a very wide range of conditions and corn is taking its place as an important crop on many of the farms of the Northwest.

The Government reports show that Montana raised 1,960,000 bushels of corn in 1915. This is raised chiefly on the non-irrigated farms, and is rapidly taking the place of the bare fallow. A crop of this sort insures profitable returns each year and furnishes the rations necessary for successful livestock raising.

Types of corn being raised in Montana are the early maturing flint and dent sorts. The Northwestern Dent, Rustler's White Dent, Minnesota 13, Triumph Flint, Longfellow Flint, and Dakota White and Gehu Flints are the varieties most commonly grown.

Silos are being constructed on many Montana farms. The above ground types and cement lined pit silos are being used with success. In the non-irrigated sections of the state, pit silos, which are simply circular cisterns, usually twenty to thirty feet deep and fifteen to eighteen feet in diameter, are common. These are inexpensive, as the only expense aside from the labor is for the cement necessary for lining.

The plan of feeding off the corn in the field by hogs or sheep is quite common. In the case of hogs the animals are run on alfalfa pasture during the early part of the season and turned into the corn fields to finish along the latter part of August or early September. This has proven profitable and calls for a minimum of labor.

Table of Grain Production

The following table, from official sources, shows the comparative production, by the acre, of six of our principal crops in twelve of the leading agricultural states of the Union, the United States as a unit, and Montana.

	Wheat	Oats	Barley	Flax	Potatoes	Rye
Ohio	20.3	41.0	31.0	.....	82.0	17.5
Indiana	17.2	40.0	28.0	.....	95.0	16.0
Illinois	19.0	45.0	34.0	.....	110.0	18.5
Michigan	21.3	42.0	29.5	.....	59.0	15.5
Wisconsin	22.7	46.5	35.5	13.5	87.0	18.5
Minnesota	17.0	43.0	30.5	10.5	106.0	19.5
Iowa	19.8	40.0	31.0	9.0	105.0	18.5
Missouri	12.3	26.0	25.0	8.0	98.0	13.5
North Dakota	18.2	40.0	32.0	9.9	30.0	15.0
South Dakota	17.1	42.0	32.0	11.0	115.0	19.5
Nebraska	18.3	32.0	31.0	11.0	105.0	17.5
Kansas	12.5	26.5	31.0	5.7	83.0	16.0
United States	16.9	37.8	32.0	10.1	95.5	17.2
Montana	26.5	52.0	34.0	10.5	155.0	22.5

MONTANA GRASSES

Alfalfa

The natural conditions for growing all kinds of legumes, such as alfalfa, clover, peas, beans, etc., are very favorable. The soils contain a high lime content, which favors the growth of these plants. No inoculation is necessary with these crops as all start readily when planted on new soils and the longer they are grown the more favorable the conditions become.

On the average there are three cuttings of alfalfa, yielding three to six tons an acre. In some sections the plan is to cut two crops of hay and then pasture the later growth.

On the non-irrigated lands alfalfa is commonly grown. Under this condition it is planted either broadcast or in rows and cultivated during growth. This insures a good yield of hay in addition to a good return of late pasture, even in the very dry years.

Alfalfa Seed

The natural conditions in Montana favor the production of alfalfa seed. Quite a number of carloads are each year being raised in the state. The weather conditions at the time alfalfa is in blossom encourage the fertilization of the flowers and the crop finds ample time to ripen before fall frosts. Where a seed crop is desired, no hay is cut from the field that season, as a rule.

With the growing popularity of alfalfa and the increasing demand for seed, alfalfa seed raising is destined to become a very profitable industry in Montana. The yield averages around four bushels to the acre and the price is from seven to twelve dollars a bushel. Yields of eight bushels to the acre are not uncommon, and as high as sixteen bushels of alfalfa seed has been harvested from a single acre in the state.

Clover

Common red and alsike clover are generally grown in Montana. On many farms common rotation is two years corn and two years of clover and alsike mixed. The yield ranges from two to five tons an acre from the two cuttings.

Grasses

Timothy, Brome grass, Orchard grass, Tall Oat grass, Redtop, and other introduced grasses thrive in the state. Among the native grasses Bluejoint and Western Wheat grass are quite important as hay and pasture producers. The native Buffalo grass is important as a range pasture grass.

Sugar Beets

Montana has one sugar factory for handling sugar beets. This

BEAR HUNTING IS PRACTICAL AS A RECREATION IN MONTANA

ONE OF THE ENJOYMENTS OF LIFE IN MONTANA

is located at Billings in the Yellowstone valley. Experience at this factory has clearly shown that in production and quality Montana beets are unsurpassed. Yields of over twenty tons to the acre are raised and the average for the entire acreage is high. Sugar manufacturers have examined conditions for beet production in several other sections of the state and the reports have shown the natural conditions for beet production to be very favorable. As fast as financial and market conditions warrant, there is sure to be an increase in the sugar beet area of the state.

Root Crops

Tests reported by the Experiment Station show that mangels, turnips and other root crops do well in Montana. In 1914 the yields in the Experiment Station tests were:

	Tons to the Acre
Mangels	42.8
Rutabagas	22.
Dwarf Essex Rape	26.
Kale	31.3

For the stock raiser who has been used to European and intensive American conditions this possibility means much.

Fruit

Growers in the recognized fruit states were much surprised when it was announced that the Grand Prize for apples at the Panama-Pacific Exposition had been awarded to Montana. In making this award the judges considered variety and quality, and when it is remembered that nearly all of the fruit states were represented with big exhibits it shows that Montana has a very important future as a fruit producing state. In the western and southern portions of the state commercial orcharding is extensively carried on. Such high grade varieties as the McIntosh Red and Wealthy are raised in large quantities of very superior quality. Many other varieties are also raised as most of the standard sorts grow in a splendid way in Montana. There are probably no sections of the state where a variety of fruit cannot be grown. In 1915 Montana produced 347,000 bushels of apples, an increase of 47,000 bushels over 1914. Even in the higher altitudes the hardy apples and hardy American plums, pears and sour cherries do well, and in the milder sections of the state sweet cherries, peaches, apricots and grapes are successfully grown. All the small fruits, such as raspberries, currants, gooseberries and strawberries can be grown in practically every part of the state.

Ornamental Trees and Shrubs

These, to most people, add much to the attractiveness of the farm home. That no more people have them is more often the result of imaginary than real difficulties in growing them. Home builders get the impression that trees will not grow, so they make

no attempt to make the home more habitable by planting trees for shade, wind protection and ornament.

There are really no sections of Montana where native trees are not found growing. These can be transplanted to the yard or wind break. The native cottonwood, the poplars (especially those known as Canadian), the green, and in some places the white, ash, the box elder, the golden willow, the Siberian pea-tree, the lilacs, honeysuckles and others may be grown for ornament, shade or wind protection. When these trees are established, the native evergreens may be started in their shade and protection. All that is necessary to start a successful tree plantation is a little care in the preparation of the soil and in good cultivation for a few years.

Educational Facilities

During the early years, when Montana was a territory, and during her twenty-six years of statehood, thoughtful attention has been given to promoting educational advantages. This applies to her system of public and high schools, institutions of higher education, libraries, etc.

The state has a system of county high schools. This insures sufficient support for complete and modern equipment and for competent teachers. In many of these schools, courses are offered in agriculture, manual training and home economics. The high school is a community center for the county and its force is being very fully felt in the state.

Montana has four institutions of higher education: The State Agricultural College at Bozeman, State University at Missoula, State School of Mines at Butte, and the State Normal College at Dillon.

The Agricultural College carries on work in agriculture, engineering, and home economics. The 1914 attendance was nearly eight hundred. This institution has a well organized system of extension service to carry the work out over the state. Under this is included the Farmers' Institute work, the County Agriculturist work and the holding of schools for from one to several days in the various communities of the state. For the past few years the average of over 40,000 people have annually attended the meetings held.

The Experiment Station is carrying on much valuable work with crops, livestock, fruit, etc. In addition to the home station at Bozeman there are four branch or substations where careful experimental work is done. This means much to a developing state, as the tests conducted guide farmers in the selections of their crops and the methods of management of their livestock.

The State University located at Missoula is fully prepared to give complete courses in law, education, journalism, various lines of science and the different branches of arts. This institution has an enrollment of over nine hundred students in 1914 and is growing rapidly.

SILOS ON A DAIRY FARM NEAR GLENDIVE

ON THE NINE QUARTER CIRCLE RANCH, GALLATIN VALLEY

The Montana State School of Mines at Butte is one of the best in the United States. The location at the world's biggest mining camp gives the students great practical advantages and the graduates have been unusually successful.

At the State Normal College, located at Dillon, modern facilities are provided for training young people for the teaching profession. The attendance at this institution is large and the record of its graduates is enviable.

The state of Montana is well provided with public libraries. All towns of any size have a free public library with a large collection of well selected books. In point of library support Montana is in the forefront amongst the states. She has a county library law which provides for a tax to purchase books which may be sent to the different centers of the county. This law has meant a great deal in states like California, where it has been tried, and its operation in Montana is sure to result to the great advantage of residents who are too far from the larger towns to be in close touch with the central libraries.

Livestock in Montana

By F. B. Linfield

Montana has always been a great livestock state. In the early days the buffalo in countless thousands roamed over the plains; later, cattle and sheep by the millions found sustenance on the open range pasture. The coming of the settlers has compelled a modification of the open range feeding. It has not, however, changed the natural conditions so favorable to livestock, while it has added an abundance of winter feed all over the range country.

The coming of the farm settler has caused the range to be divided up, but it is doubtful if more than one-third of the land area of Montana will ever be plowed. Mountains, forests and broken hilly lands make up the rest of the country, which can only be used as pasture. A very important question before the Montana people is how to improve and effectively use the range pasture as an adjunct to the farm.

An important element in success with livestock in Montana is to be able to reduce the labor cost of production as much as possible. The animals should, to a large extent, gather their own feed, and when hand feeding has to be resorted to, whenever possible adopt the wholesale rather than the retail method. A little planning will save a great deal of time and labor in caring for the livestock.

The Montana climate is dry with but slight extremes of temperature in most localities. Except for poultry, young stock and dairy cows, no protection except a shed is needed. This shed, however, should be dry, well bedded and protected from the prevailing winds. This will provide a comfortable place for the stock to lie down.

The interest in beef production is increasing decidedly. Well

bred calves have been selling, this fall, at from $30 to $35 each and yearlings at $50 to $55. This looks as if the Montana farmers' opportunity had come. In the early days it was not thought possible to raise calves profitably and so thousands of cattle were shipped from the South to the Montana ranges. With the coming of the farmer and the growing of grain and forage crops all through the range country, the raising of calves and young stock may be made a profitable business. There is room for a large revival of the cattle industry along these lines. It is also possible to fatten beef cattle at a profit in Montana. Tests conducted at the Experiment Station show that in the feed lot, a gain in live weight may be put upon a steer, by means of Montana feeding methods, at from 5 to 7½ cents a pound, which is as low a cost as the feeder of the corn belt can expect. Moreover, Montana feed will give as good a finish and as good quality of meat as may be produced in any other state, provided the animals are properly fed. Producing high grade beef bred calves and yearlings and grain feeding steers for market are rather new industries for Montana, and we have yet much to learn about the details of the business. I can see no reason, however, why this line of livestock production may not be made very profitable under proper management. Montana has at the present time a larger number of high grade pure bred beef cattle than ever before in its history. Shorthorns, Herefords, Polled Angus and Gallaways are all represented, though the first two breeds make up the bulk of the pure bred stock.

Swine production in Montana is growing in magnitude. This is a class of livestock with which it is inexpensive to get started. The foods produced in the state are such as make for rapid and economic growth. Our farmers are so situated as to be able to take advantage of either the eastern or western markets. A substantial beginning has also been made in providing a home market. Small but efficient packing plants are in operation at Billings, Anaconda, and Great Falls.

Our people have been studying several methods of production and management, growing the pigs at a minimum of cost and fattening them during the winter when labor is available. Under this system one litter is depended on coming in April or May. The sows are well fed while suckling the pigs and they have a run to an alfalfa pasture as soon as it starts growing. The young pigs have a little grain until the winter wheat harvest in August, when sows and pigs are turned into the grain fields and receive no other feed till snow flies. usually about the middle of November. The shoats are then put to fatten and are ready for market in February or March. The sows are allowed to have the run of the alfalfa stack and also have access to sugar beets, and while receiving no other food or care during the winter come through in excellent condition.

The beginner's winter hog house is usually a straw covered shed divided so as to permit grading the feeding hogs according to size.

In the eastern part of the state corn forms the main hog ration,

A GALLATIN VALLEY WHEAT FIELD

CUTTING CORN IN EASTERN MONTANA

and hogging off this crop has proven a profitable method of harvesting it and also of fattening the hogs. The hogs should also have the run of an alfalfa field and an abundance of drinking water must always be available.

There are now a large number of pure bred herds of hogs in the state, nearly all the common breeds being represented. There are several feeding herds that run up into the hundreds and there are many as finely equipped hog breeding and feeding plants as can be found in any state. Under average conditions and with proper care, hog raising is among the very profitable livestock industries of the state.

Sheep and wool have always been an important branch of the livestock industry of the state. There are yet many large bands of sheep, but the settlement of the country will tend to reduce them. The range sheep industry, however, will, I believe, persist, as it can best utilize the large area of broken and rough range pasture. The present prices for lambs and wool assure the careful manager a good margin of profit on his flock. There is also going to be a large place for a small flock of sheep on the farm. The sheep is a gleaner and will eat many things refused by other classes of livestock. Even on the irrigated land our farmers find the sheep a profitable animal, some say equal to, or even better than, the hog, as they use less concentrated food and require much less labor. On these farms the mutton type of sheep is most largely used. Frequently pure breds are kept and the profits added to by selling breeding stock. Local sheep breeders associations are being formed among the farmers for mutual help in improving their flocks, and also to permit of the marketing of the wool and lambs to the best advantage.

The Montana livestock industry is broadening very much. While the state does not yet produce all the butter used in the state and practically none of the cheese, yet the dairy industry is growing and promises within a few years to supply the local demand and even become a source of supply for the consuming centers.

The climatic conditions are particularly well adapted to the dairy business and the production of milk of high quality. In the irrigated and mountain valleys there is an abundance of good water and the pasture may be kept green and growing through the summer, while the alfalfa and clover make the basis for an ideal ration. In the eastern part of the state corn and the silo will play a large part in the dairy development. The alfalfa hay with the corn silage will make a cheap and efficient ration for the dairy cow.

Within the past few years very many carloads of dairy cows have been shipped to the state. There are also several herds of pure bred dairy cows. Holsteins, perhaps, predominate in numbers, but there are representative herds of Jerseys, Guernseys, Brown Swiss and Ayrshires.

There are some 40 to 50 creameries in the state, but only one

or two small cheese factories. There is room for large expansion in the dairy business, and with proper organization of the manufacturing and marketing end of the business it will become one of the most profitable lines of farm work in the state.

The best organized and most enthusiastic producers of livestock and livestock products in Montana are the poultrymen. True, the fancy poultry breeder brings to his work the greatest enthusiasm, yet the interest in the business is extending to those who find their profits in eggs and dressed poultry. The prices for poultry and eggs are good at all seasons of the year but especially so in the winter season, and experience has shown that it is possible to get the winter eggs in Montana when the birds are hatched early in the spring and properly matured before winter sets in. Poultry takes a little more care than other classes of livestock but the person who understands how to give that care will find an abundant reward for his efforts.

Livestock Production in Montana

Montana shows a big increase in livestock during the past five years. The figures show a steady growth in all lines of stock with the cattle showing the largest increase.

The official figures are as follows:

	No. in 1910	No. in 1915
Horses	344,000	430,000
Mules	4,000	4,000
Milch Cows	85,000	129,000
Other Cattle	813,000	894,000
Swine	124,000	298,000

Montana ranks first in the production of sheep. The estimated wool clip for 1915 was about 29,000,000 pounds, bringing the price of 26 cents a pound.

MONTANA BY COUNTIES

The following is a description by counties of the country more particularly tributary to the Northern Pacific Railway.

Beaverhead County

Beaverhead County, located in the southwestern corner of the state, contains the sources of the Missouri river and is well watered. The principal rivers are the Beaverhead and the Wisdom or Big Hole, and each has many tributaries. Along the streams are valleys of varying sizes, from which rise bench lands and rolling hills that extend to high mountains.

The discovery of gold at Bannack in 1862 caused a stampede

SHEEP RAISING IN MONTANA IS A PROFITABLE BUSINESS AND YIELDS EXCELLENT RETURNS

MONTANA FARMERS USE THE LATEST TYPES OF MACHINES

into what is now Montana; other rich placer deposits were soon found; the territory of Montana was created and Bannack made the capital. Beaverhead County was created by act of the first territorial legislature, approved February 2, 1865. Many of the most interesting events in the early history of Montana occurred in this county.

Beaverhead County embraces much picturesque scenery, is noted for the excellence of the fishing and hunting, has several hot springs, and many residents of the cities of Butte and Anaconda enjoy outings there in the summer.

The industries are stock growing, farming and mining. Large quantities of gold, silver and lead have been mined, and many undeveloped mines and mining districts offer attractive opportunities for the investment of capital. Near Melrose, large deposits of high grade phosphate rock have been discovered on public land and many thousand acres have been withdrawn from the operation of the laws relating to the acquisition of mining claims.

Farming lands are irrigated and non-irrigated. The chief farming district embraces land in the Beaverhead valley and the smaller connecting valleys of Blacktail, Rattlesnake and Grasshopper creeks. Oats and hay are the principal crops. Oats yield from 60 to 100 bushels an acre and are of a very high grade. Farming without irrigation on bench lands is being rapidly developed. Good crops of wheat, barley, flax, potatoes and other products have proved the adaptability of large areas of bench lands for successful farming without irrigation. Thousands of acres are planted to alfalfa and timothy and the native grasses yield good crops of excellent hay.

The leading industry is stock growing, which includes the raising of sheep, cattle and horses. The numerous flocks of sheep flourish on the nutrious native grasses and produce great quantities of wool. Large sums are annually realized from the sale of horses. The cattle industry has two phases; one is the raising of cattle bred in the county and the other is the fattening of beef steers bought outside the county, and sometimes outside the state, and brought into Beaverhead County to be fattened for the market. Annually more than 20,000 steers are fed in the winter in the Big Hole Basin.

Markets for all products are close at hand. Butte gets much of its farm products from this county. Transportation is provided by the Gilmore and Pittsburg Railroad, a subsidiary line of the Northern Pacific Railway, which has been built from Armstead west to Salmon, Idaho.

Dillon, the county seat, is a delightful place of residence and is the principal business point in the county. It had a population of 1,835 in 1910. In the city are two banks, a good hotel, two wholesale and twelve retail stores, a fine public library and public schools noted for their excellence. Two weekly neswpapers are published. Dillon has electric lights, water works and sewers.

The Montana State Normal College, a branch of the University of Montana, and a well equipped institution for the training of men and women to become teachers in the public schools, is located at Dillon. The college possesses a well merited reputation for the success it has achieved, many of the most efficient teachers in the public schools of Montana being graduates of the Normal.

Other towns include Lima, an important shipping point in the southern part of the county, and Wisdom, an inland town, in the heart of the famous Big Hole basin.

The population of Beaverhead County in 1910 was 6,446; the present estimate is a population of 10,108. The assessed valuation is $9,539,805.

Land Area—Beaverhead County, which is in the Helena land district, embraces an area of 5,632 square miles, including 409,302 acres of unreserved and unappropriated public land available for entry under the homestead law; 163,414 acres of state land, and 1,401,618 acres of national forests. Of the total area of the county, 538,604 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915; wheat, 375,000 bushels; oats, 1,100,000 bushels; barley, 20,000 bushels; potatoes, 250,000 bushels; hay, 185,000 tons.

In 1915, the assessor's rolls showed the following livestock: Horses, 13,078 head; milch cows, 1,551 head; other cattle, 64,136 head; sheep, 157,744 head; swine, 1,318 head.

Big Horn County

Big Horn County was created January 6, 1913. The principal geographical feature of the new county is the Big Horn river, from which it is named. The Little Big Horn river also traverses the county and its course is followed by the Burlington railroad. On this stream is the Custer Battlefield National Cemetery, in which have been placed monuments to the soldiers who fell in the disastrous battle of the Little Big Horn, June 25, 1876. Big Horn County includes nearly all of the Crow Indian reservation and a part of the Northern Cheyenne Indian reservation.

The development of the county as a farming region dates from the opening to settlement, in 1906, of a part of the Crow Indian reservation, and it is expected that further cessions of Indian lands on the reservation will be made before many years, as the amount of land included within the reservation is much in excess of the needs of the Indians. In addition to opportunities to thus obtain ceded lands, Indian owners, under certain conditions, may lease their tracts to the whites, and from time to time sales are made of lands that belonged to Indians who have died.

The industries are stock raising and farming, but coal has been found in numerous places, and ranchers near Hardin get their

OATS FROM THE FT. KEOUGH RESERVATION, NEAR MILES CITY

STACKING ALFALFA ON RANCH NEAR BRIDGER, MONTANA

supplies from convenient coal banks. Much is expected from oil and gas development now in progress in this county. The Big Horn river is a rapid stream, having many falls and is capable of furnishing hydro-electric power in large quantities, one proposed project alone providing for the development of 210,000 h. p.

The elevation of the Big Horn valley is about 2,900 feet and the climate is excellent. The growing season is long and the soil fertile. All the grains, grasses and vegetables that grow anywhere in the state make excellent yields. Common acre yields are: Oats 50 to 105 bushels; wheat, 30 to 65 bushels; alfalfa, 5 to 7 tons; while 60 bushels of corn and 600 bushels of potatoes to the acre have been raised. Sugar beets are of excellent quality. The beet crop is a cash crop and the grower nets from $40 to $60 an acre. Parts of the county seem to possess advantages for the growing of apples on a commercial scale.

The chief agricultural development is in the Big Horn valley. Hardin is the center of 100,000 acres of irrigated land in the Big Horn and Little Big Horn valleys. The Big Horn valley extends north 35 miles to the Yellowstone valley and south 50 miles to the canyon of the river. West of Hardin is a high table land of 150,000 acres which it is proposed to irrigate.

In the northern part of the county and in other parts are large areas of land heretofore chiefly used as grazing lands that are suitable for dry farming, and this industry is being rapidly developed.

The Burlington Railroad follows the banks of the Little Big Horn river from a point near the Wyoming line to Hardin, where it turns to the northwest and after a few miles enters the Yellowstone valley which it follows to its terminus at Billings. From Billings, trains of the Burlington line continue to the Pacific coast on the tracks of the Northern Pacific Railway, by way of Butte, or Helena, and Missoula.

Hardin, the county seat, is the only incorporated town. It is situated sixty miles southeast of Billings near the junction of the Big Horn and Little Big Horn rivers. It has many substantial business houses and residences, some built of town made brick. It possesses a water system, a telephone system extending down the valley, has grain elevators, banks, a newspaper, churches, schools, and hopes for the establishment of a beet sugar factory.

Big Horn County has a population estimated at 3,500 and property with an assessed valuation of $4,963,521.

Land Area—Big Horn County, which is in the Billings land district, embraces an area of 5,111 square miles, including 375,900 acres of unreserved and unappropriated public land available for entry under the homestead law, and 42,538 acres of state land. Of the total area of the county, 247,192 acres are privately owned. The remainder of the county is included in Indian reservations.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 250,000 bushels; flax, 5,000 bushels; barley, 151,000 bushels; corn, 35,000 bushels; oats, 375,000

bushels; potatoes, 160,000 bushels; hay, 45,000 tons; sugar beets, 10,000 tons.

In 1915, the assessor's rolls showed the following livestock: Horses, 5,910 head; milch cows, 703 head; other cattle, 47,976 head; sheep, 55,558 head; swine, 2,106 head.

Broadwater County

Broadwater County lying north of Gallatin, south of Lewis and Clark, west of Jefferson and east of Meagher counties, embraces the upper Missouri river valley and is within close shipping distance of the cities of Butte and Helena.

The Big Belt range forms the eastern, and a range of lower lying mountains, unnamed, the western boundary. In both ranges rise streams that flow into the Missouri river. The principal agricultural districts are in the Missouri river valley and in the valley of Crow creek.

The industries are farming, stock raising and mining. The mineral area is extensive and rich and the placer and quartz mines have yielded great sums. The principal mines are at Radersburg and Winston, from which places many tons of ore are annually shipped to smelters.

The range sheep industry has been the source of many fortunes for men who owned from 2,000 to 20,000 sheep. Mountains and foothills still afford good range for many horses, cattle and sheep. Much attention has been paid to the breeding of high grade stock. The claim is made that Broadwater County has the best horses in Montana.

Fine herds of beef and dairy cattle are numerous. In 1904 fifty farmers and business men organized and started the Townsend Creamery, which is the pride of the county. From a small beginning the output has steadily increased and about 200,000 pounds of butter of a superior quality are produced annually. The butter finds a ready sale at Helena and other neighboring cities. More recently a flour mill was erected at Townsend and the product readily found a profitable market.

There are pure bred herds of Poland-China, Chester White, Berkshire, Duroc and Hampshire hogs and the raising of swine is profitable.

The principal farming districts are in the Missouri and Crow creek valleys, where many thousand acres are irrigated. The chief crops are oats, wheat and alfalfa, timothy, and bluejoint hay. Oats make large yields, are of a superior quality, and have been sold to cereal mills and for seed. Wheat is in demand from millers and many cars of alfalfa and timothy hay are shipped annually. Potatoes yield from 300 to 400 bushels to the acre and other vegetables do equally well.

During the last few years many thousand acres on the foothills and benches that extend from Three Forks to the northern

HAYING TIME IN ONE OF MONTANA'S PROLIFIC FIELDS

SOME MONTANA SHORT HORNS

end of the county have been settled up and farmed without irrigation. A large part of the uplands is adapted to dry land farming and good crops have been raised at many places, the rainfall in the spring and early summer being sufficient to produce large yields of all crops that are properly planted and cultivated. The soil, a warm and very productive loam, is easy to work. Winter wheat, rye, bald barley and alfalfa are the chief crops on non-irrigated farms. Raw lands may be bought at low prices and turned into productive farms. Large ranches have been subdivided and are offered for sale in farm lots.

The raising of apples and other fruits on a commercial scale is a new and promising industry. Apples of many varieties have been grown. At the Stafford ranch near Avalanche creek is an excellent orchard that has been in bearing for twenty years; and it is said that four thousand dollars were received from the sale of fruit gathered one year from fifteen acres.

The main line of the Northern Pacific Railway follows the Missouri valley from Lombard to Townsend, and the Butte branch is separated by the Jefferson river from the southern boundary.

The chief towns are Townsend, Winston, Radersburg and Toston. Toston is the shipping point for the growing mining camp of Radersburg, eleven miles west, and for an extensive country, including much of the fertile Crow creek valley. Winston, twenty-one miles from Helena, is the supply point for a rich mining district and a farming and stock region.

Townsend, the county seat and principal town, located where the Northern Pacific Railway crosses the Missouri river, is a financial, educational and social center. The population in 1910 was 759. The city owns the electric lighting plant, has a volunteer fire department, five miles of sidewalks, graded streets, fine street lights, excellent schools, Catholic, Episcopal, Methodist and Southern Methodist churches, good school buildings, large business houses, good residences, two elevators, a flour mill, a creamery and a newspaper.

The population of Broadwater County is estimated at 4,803 and the assessed valuation is $4,260,871.

Land Area—Broadwater County, which is in the Helena land district, embraces an area of 1,248 square miles, including 141,516 acres of unreserved and unappropriated public land available for entry under the homestead law, 20,971 acres of state land, and 221,653 acres of national forests. Of the total area of the county, 309,117 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 300,000 bushels; hay, 43,000 tons; apples, 15,000 bushels; currants, 2,000 quarts; barley 15,000 bushels; corn, 5,000 bushels; oats, 425,000 bushels; potatoes, 125,000 bushels.

In 1915, the assessor's rolls showed the following livestock: Horses, 5,480 head; milch cows, 939 head; other cattle, 10,319 head; sheep, 57,211 head; swine, 1,796 head.

Carbon County

Carbon County, which adjoins Wyoming and takes its name from the extensive coal deposits that exist within its boundaries, was created from parts of Park and Yellowstone counties by an act approved March 4, 1895.

The southern part is a mountainous region of great scenic beauty in which rise numerous streams whose waters flowing north through valleys of varying width finally discharge into the Yellowstone. The largest stream is Clark's Fork of the Yellowstone. Rock creek is a large stream that flows through the central part. Many thousand acres in the valleys are irrigated from canals that bring water from these streams and their rapid fall make them available as sources of hydro-electric power.

In the mountains are forests, gold, silver, lead and copper mineral claims, excellent hunting and fishing, and much remarkably beautiful scenery. In the southern part of the county, along the Wyoming border, lies the Elk basin oil field, which is the scene of the first discovery of oil in commercial quantities in Montana and is now being extensively developed. Two large companies and many smaller concerns are now operating in this district, and there is every indication that it will shortly become one of the great oil-producing regions of the country. It is expected that a pipe-line will shortly be laid for the transportation of the petroleum to refineries. The Elk Basin oil field is now reached most easily from Bridger, a station on the Clark's Fork branch of the Northern Pacific, connecting with the main line at Billings.

Other industries are coal mining, stock raising, and fruit growing. Immense coal measures exist. A Government report stated that in 1907 there were 1,238,796,784 tons of unmined coal in the Red Lodge field, which is one of several fields. Forty-five feet is the total thickness of the veins.

A thousand men are employed at Red Lodge and about 600 at Bear creek, Washoe, Bridger and Coalville, making a total of about 1,600 men who are employed at good wages and their demands create a home market for farm products.

Stock growing is an important industry. Many sheep run on the ranges and Carbon County is noted for the excellence of its beef cattle. Besides raising livestock on the range and hogs on alfalfa pastures, Carbon County has uncommon advantages for the fattening of beef cattle and sheep for market, having a good climate, abundance of water, and home grown hay, grain, beet tops and beets for food. The conversion into beef, mutton or pork, of hay and grain on the place where produced, is the most profitable use that can be made of these crops.

The Clark's Fork valley, about fifty miles long and from four to ten miles wide, is the principal agricultural district of Carbon County and is one of the most productive parts of Montana. From the river and streams that flow into it enough water is

CUCUMBERS RAISED FOR PICKLES ON HUNTLEY RECLAMATION IRRIGATED LANDS

WEST END OF CLARK'S FORK VALLEY NEAR THOMPSON FALLS

obtained to irrigate the greater part of the land in the valley, while on the foothills, farming is successful without irrigation, where the proper system of cultivation is carried on. Clark's Fork valley produces a great variety of field and orchard products. Sugar beets is a main crop, alfalfa is extensively grown, and wheat, oats and barley make large yields. Standard vegetables do well; celery is extensively grown, and cantaloupes of the Rocky Ford flavor are raised. Near Fromberg, is a noted apple orchard of Rev. J. G. Clark, from 32 acres of which $10,000 worth of apples, plums and crab apples have been gathered in one year.

The main line of the Northern Pacific Railway is separated from this county by the Yellowstone river. At Laurel the Rocky Fork branch to Red Lodge goes out from the main line and also the Clark's Fork branch, which terminates at Bridger. From Bridger the Montana, Wyoming and Southern Railroad extends to Belfry, Bear creek and Washoe, a distance of 25 miles. The Burlington Railroad has completed the Denver-Fromberg cut-off from near the Wyoming line and uses the Northern Pacific tracks from Fromberg to Laurel and Billings.

Washoe and Bear Creek are coal mining towns in the foothills west of Clark's Fork valley. Bridger is a coal mining town and the supply point for a farming and ranch country. Fromberg, the chief town of the valley, has two coal mines adjacent to it and is surrounded by a highly cultivated region of farms and orchards.

Joliet, a flourishing town in Rock creek valley, is the principal shipping point for the central part of the county.

Red Lodge, the county seat, had a population of 4,860 in 1910; is the seat of a coal mine that gives steady employment to more than 1,000 men, and is one of the busiest and most prosperous cities in the state. It has a high school, graded schools, two hospitals, two newspapers, three banks, hotels, two wholesale and thirty-five retail stores. Many new business houses have been recently erected and much money has been spent in city improvements. Many miles of cement walks have been laid and a sewer system costing $50,000 was installed a few years ago. The city is lighted by electricity, has an elevator, a creamery and does a large trade with the country tributary to it.

The population of Carbon County is estimated at 18,078 and the assessed valuation is $8,123,797.

Land Area—Carbon County, which is in the Billings Land district, embraces an area of 2,108 square miles, including 346,847 acres of unreserved and unappropriated public land available for entry under the homestead law, 44,702 acres of state land, and 359,159 acres of national forests. Of the total area of the county, 416,236 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 500,000 bushels; oats, 875,000 bushels;

barley, 150,000 bushels; corn, 15,000 bushels; potatoes, 360,000 bushels; hay, 105,000 tons; sugar beets, 75,000 tons; apples, 45,000 bushels; plums and prunes, 1,000 bushels; cherries, 750 bushels; strawberries, 15,000 quarts; currants, 10,000 quarts.

In 1915, the assessor's rolls showed the following livestock; Horses, 9,345 head; milch cows, 3,090 head; other cattle, 13,298 head; sheep, 63,437 head; swine, 4,953 head.

Custer County

Despite the fact that all of one large county and parts of two others have been taken from Custer County during the past three years, reducing its area from 12,915 square miles to 7,111, the wealth of the county is now almost as great as it was before it lost almost half of its territory, and its population is even greater. All of which is but another way of saying that Custer County is one of the fastest growing counties in the state. This county is strikingly typical of the change from a grazing to an agricultural region which has come over the greater part of eastern Montana.

The Yellowstone river flows through the northwestern part of this county, and the Powder and Tongue rivers, two large streams which rise in Wyoming, drain the southern part. Mizpah river is an important affluent of Powder river and Pumpkin creek of Tongue river. All of these streams have valleys of varying width back from which are extensive stretches of bench lands.

Custer has long been the leading stock county of Montana, and from it have probably been shipped more horses, cattle, sheep and pounds of wool than from any other county in the United States. Miles City is today the greatest primary horse market in the Northwest. The stockyards embrace 50 acres and monthly auctions are held during the season. Last year more than 29,000 of the strong, hardy, full sized horses for which Montana is noted, were sold here to buyers from foreign lands and many parts of the country. Adjacent to Miles City is Fort Keogh, an army remount station, where many horses are yearly bought and trained for the cavalry service.

The mean temperature is 44, the same as Wisconsin; the altitude is about 2,300 feet; severe storms are rare; the air is dry, and heat and cold are not felt as in humid regions; in an average year 175 days are clear, 125 partly cloudy, 65 cloudy and 80 rainy. The normal rainfall, about 15 inches, is sufficient for all properly cultivated crops. More than half of it falls during the growing season. Cottonwood and ash grow near streams and pine and cedar in the hills. The county is underlaid with lignite coal which provides cheap fuel.

Nearly every grain, vegetable and fruit known in the northern part of the United States grows in Custer County. Oats, wheat, barley, rye, corn, cabbages, rutabagas, pumpkins, squash, eggplant, cauliflower, tomatoes, cucumbers, peppers, radishes, peas, beans, celery, asparagus, make a partial list. Watermelons have a flavor and crispness that are unequalled, cantaloupes grow to perfection, and strawberries are of fine flavor, color and size. Peaches, pears, apples, crab apples, gooseberries, currants, and raspberries do well. There is a home market for fruit and vegetables and an unsupplied demand for alfalfa, dairy products, eggs, and chickens.

Horses, cattle and sheep thrive on alfalfa, which is the leading crop, and sells at from $5 to $12 a ton; an acre, cut three times a year, yields from four to five tons. Oats yield from 50 to 100 bushels an acre, barley does well, and 50 bushels of wheat is not regarded as an exceptional yield.

The transformation of Custer County from a stock to a farming County is proceeding with astonishing rapidity. Recently it has been demonstrated beyond question that Custer County is in the "corn belt" and the raising of corn, both for the grain and as a forage crop, has become an important phase of the farming industry of this part of the state. In this connection the following letter will prove interesting:

Miles City, Montana,
March 7, 1916.

Mr. G. S. Otis,
Secretary M. C. Chamber of Commerce,
Miles City, Montana.

Dear Sir:

Our white dent corn was grown on Sec. 8-6 No. 45 E., one mile from Clermont station. This corn yielded 55 bushels to the acre, and won first premium at the Custer County Fair, the Montana State Fair and the Montana Corn Show in the fall of 1915.

We believe under ordinary conditions with proper cultivation that this corn will make the heaviest yield of any corn which we have so far attempted to raise.

[Signed] LAKIN BROTHERS,
By W. P. Lakin.

The chief town is Miles City, the metropolis for all this rapidly developing empire, and the county seat. It is located at the junction of the Tongue and Yellowstone rivers, and is an up-to-date, growing, progressive western town of 4,697 people. There are two daily and three weekly newspapers, a number of manufacturing establishments, many wholesale and retail stores. It is the distributing point for a large and developing territory, ships more horses, cattle, sheep and wool than any other town of its size in the country. Many opportunities exist for the investment of capital in manufacturing and other enterprises.

The population of Custer County is estimated at 24,765, and the assessed valuation is $14,272,833.

Land Area—Custer County, which is in the Miles City land district, embraces an area of 7,111 square miles, including 1,598,400 acres of unreserved and unappropriated public land available for entry under the homestead law, 205,814 acres of state land, and 341,293 acres of national forests. Of the total area of the county, 1,443,232 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 700,000 bushels; oats, 850,000 bushels; barley, 28,000 bushels; corn, 210,000 bushels; flax, 95,000 bushels; potatoes, 85,000 bushels; hay, 30,000 tons.

In 1915, the assessor's rolls showed the following livestock: Horses, 22,224 head; milch cows, 1,378 head; other cattle, 52,998 head; sheep, 113,339 head; swine, 1,509 head.

Dawson County

Dawson County, organized in 1869, and named for Andrew Dawson, for many years a leading man in the fur trade, is the

HOG RAISING ON THE LOWER YELLOWSTONE PROJECT

largest county in the state, having an area of 9,280 square miles, consisting for the most part of prairies, bench lands and hills. There are no mountain ranges, although the Mountain Sheep hills parallel the Yellowstone river in the eastern part of the county and form a divide between the drainage basin of the Yellowstone and the much larger area that drains into the Missouri river. The Musselshell river is the western, and the Missouri river the northern boundary. Big Dry and Red Water creeks, which flow into the Missouri river, have extensive drainage basins. The Yellowstone river flows through a part of the county.

Stock growing was the first occupation of the settlers in Dawson County and remains a leading industry. Perhaps one-fourth of the entire acreage is too rough to be farmed and will always be devoted to grazing. Agriculture was first followed as a business in the Yellowstone valley where many thousand acres are irrigated.

The greatest advance, however, has been in the increase in the acres farmed without irrigation, so-called "dry land farms." Farming without irrigation is a demonstrated success on farms of thousands of new settlers who have filed on homesteads and have transformed a part of the vast range into productive grain fields. Large stock ranches also have been sub-divided and sold as farms and many acres of Northern Pacific Railway lands have been put into cultivation.

The average annual precipitation at Glendive for the last 25 years was 15.54 inches. At places the rainfall is greater and everywhere it is sufficient when properly conserved. The evaporation is much lower than in states farther south and the timeliness of the rainfall increases its efficiency. Of the total of 15.54 inches of precipitation at Glendive, 10.72 inches falls during the crop growing season, as follows: March, 1.32 inches; April, 1.10 inches; May, 2.29 inches; June, 3.39 inches; July, 1.78 inches; and August, .84 inches.

Wheat, oats, rye, barley, flax and alfalfa are the chief crops. Yields are reported of oats, 100 bushels to the acre; flax, 34 bushels; barley, 42 to 60 bushels; wheat, 50 bushels; and corn, 45 bushels. From all parts of the county have been collected reports of high yields on large fields of all staple crops.

Dawson County is now reached by the Northern Pacific Railway, which maintains division headquarters at Glendive.

Dawson County is underlaid with coal which is sold at low prices in the towns; and the farmer who has not opened a deposit of coal on his own place is able to obtain a supply from some coal bank in his neighborhood.

The principal towns are Glendive and Jordan. The county seat is Glendive, whose population in 1910 was 2,428 according to the census, and is now said to be 5,000. It is a division point on the Northern Pacific Railway, which employs about 800 men with a monthly payroll of $65,000. A Northern Pacific Railway hospital has recently been completed at a cost of $125,000. Glendive is a progressive, growing town, is well lighted, has large business blocks, banks, hotels, newspapers, fine public buildings,

attractive residences, and has spent more than a million dollars on municipal improvements.

The population of Dawson County is estimated at 19,342, and the assessed valuation is $10,854,401.

Land Area—Dawson County, which is in the Miles City, Lewiston and Glasgow land districts, embraces an area of 9,280 square miles, including 2,077,215 acres of unreserved and unappropriated public land available for entry under the homestead law, and 242,010 acres of state land. Of the total area of the county, 1,733,228 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 850,000 bushels; oats, 1,200,000 bushels; barley, 125,000 bushels; corn, 85,000 bushels; flax, 50,000 bushels; potatoes, 95,000 bushels; hay, 22,000 tons.

In 1915, the assessor's rolls showed the following livestock: Horses, 20,409 head; milch cows, 3,240 head; other cattle, 15,734 head; sheep, 118,195 head; swine, 3,678 head.

Deer Lodge County

Deer Lodge County, which is in western Montana and is drained by Deer Lodge river which later becomes the Hellgate and Clark Fork of the Columbia, is one of the original counties of the territory. By the formation of new counties it has lost the greater part of its original area and is now a very small county, and yet is one of the richest in the state.

The chief industry is copper smelting. At Anaconda is located the Washoe Smelter, of the Anaconda Copper Company, which employs about 2,000 men and has a monthly payroll of about $215,000. This great smelter is the largest and most modern ore reducing plant in the world and smelts about one-fourth of the copper produced in the United States. The ores are brought from the mines at Butte, 28 miles distant, directly to the smelter by the Butte, Anaconda & Pacific Railroad, which was built for this traffic, and which is operated exclusively by electrical power. Even after an inspection of the smelter one can scarcely comprehend the immensity of its operations.

In connection with the smelter is an extensive sulphuric acid plant, while great quantities of arsenic are also saved as a by-product.

Constant progress is made in reducing the cost of production of copper by lessening the cost of getting out ore at the mines and in treating it at the smelters. Large savings have recently been effected by the increased use of electrical power; and the mines of Butte and the smelters of Anaconda and Great Falls are models of efficient operation, while the wage scale is the highest in America.

Anaconda, the county seat, owes its existence to the late Marcus Daly, founder of the copper industry in Montana, who was attracted to it by the presence, so near Butte, of an abundant supply of water. It has grown into a city of 10,134 inhabitants, is an attractive place of residence, has one of the most costly hotel edifices in the state, many large business blocks, handsome dwellings, a daily newspaper, and manufactories of fire and building brick. The county court house, the Hearst library, and the Margaret Theatre would be notable buildings in a much larger city. The Montana State Fish Hatchery is located in beautiful Washoe Park.

Population and business of Deer Lodge County are chiefly centered in the city of Anaconda, which is situated at the base of the mountains. In the mountain regions are placer and quartz gold mines, extensive forests and many places of much scenic beauty. The Butte, Anaconda & Pacific Railway has recently been extended into the mineral region near Georgetown, which is expected to develop into a very productive mining district.

At Warm Springs is located the State Hospital for the Insane, which cost more than $500,000.

Hay and oats find a ready sale in Butte and Anaconda. In these two cities, many millions are annually paid to miners and smeltermen and their needs for products of the dairy and the garden create the best of markets for Deer Lodge County products.

The population is estimated at 15,000, and the assessed valuation of the County is $9,938,341.

Land Area—Deer Lodge County embraces an area of 746 square miles, including 37,813 acres of unreserved and unappropriated public land available for entry under the homestead law, 10,911 acres of state land, and 307,793 acres of national forests. Of the total area of the county, 153,190 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 22,000 bushels; oats, 150,000 bushels; barley, 2,500 bushels: potatoes, 100,000 bushels; hay, 21,000 tons.

In 1915, the assessor's rolls showed the following livestock: Horses, 4,050 head; milch cows, 974 head; other cattle, 2,807 head; sheep, 5,300 head; swine, 584 head.

Fallon County

Fallon County occupies the extreme southeastern corner of the state, and is just beginning to attract attention to its diversified resources. For many years, Fallon, which was formerly a part of Custer County, was merely a great stock range; today it is largely a grain field, and every year thousands of new acres are brought under the plow.

The Little Missouri river crosses the southeastern corner of the county and the northern part is watered by Fallon and Beaver creeks. Box Elder creek flows through the central part of the county. Many extensive valleys follow the courses of these streams and back of these valleys are great stretches of bench lands farmed by the non-irrigated method.

In addition to the farming and stock raising industries of the county, natural gas in commercial quantities has been developed at Baker and extensive prospecting is now in progress for oil.

Baker, the county seat and principal town, is growing rapidly. It is one of the newer towns of the state, but in 1915 claimed a population of 1,500 and has every prospect of soon having 2,500 people within its confines. Ekalaka, in almost the geographical center of the county, is a large inland town, surrounded by a good farming and stock raising country.

The population of Fallon County is estimated at 11,385, and the assessed valuation is $8,451,930.

MONTANA BEEF AND DAIRY HERD—CLIMATE, GRASS AND WATER FORM AN INVINCIBLE COMBINATION

Land Area—Fallon County embraces an area of 5,003 square miles, including 1,362,400 acres of unreserved and unappropriated public land available for entry under the homestead law, 128,603 acres of state land and 107,580 acres of national forests. Of the total area of the county, 855,188 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 500,000 bushels; oats, 560,000 bushels; barley, 52,000 bushels; corn, 92,000 bushels; flax, 65,000 bushels; potatoes, 95,000 bushels; hay, 20,000 tons.

In 1915, the assessor's rolls showed the following livestock: Horses, 19,535 head; milch cows, 3,473 head; other cattle, 30,928 head; sheep, 74,952 head; swine, 2,199 head.

Flathead County

Flathead County is situated in the northwestern part of the state, and includes the large and fertile Flathead valley and the beautiful Flathead lake. It was created out of Missoula County in 1893, and is named for the Indian tribe that formerly occupied the country. The eastern boundary is the main chain of the Rocky mountains, of which the Flathead and Mission ranges in the southern part of the county, are outlying ranges. Mountains on the west separate the drainage basins of the Flathead river from those of the Kootenai and Clark's Fork of the Columbia. The northern part is mountainous; in the southern part lies Flathead lake, bounded by the low hills beyond which lies Mission valley. This is a region of numerous springs, streams, rivers and lakes, which drain into Flathead lake and flow out from it by the Flathead river at Polson.

Flathead lake has an area of 360 square miles and is the center attraction. Around its wooded shores are some of the most beautiful spots on the continent. Orchards grow close to the water, and attractive summer homes are found at many places.

During 1915, the Federal Government sold more than 900 villa sites along the shores of Flathead lake, and, with the many summer homes which are now being built around the lake, it is expected that this will shortly become one of the great summer colonies of the country. Flathead lake is not merely a wonder and a delight to the visitor, but is of great practical use. It is navigable, and numerous fast passenger boats make regular trips between lake ports during the summer season. Besides steamboats and gasoline launches, there are tugs, barges and rafts which transport considerable freight.

Lumbering is a great industry and there are numerous mills. Kalispell has large mills and, at Somers, where there is also a tie-preserving plant, is one of the largest mills in the county. In the northwestern Montana lumber district, the standing timber has been estimated as amounting to forty billion feet. In the lumber industry about 2,000 men are employed and receive for wages about $1,250,000 a year. The lumber sold brings $2,500,000.

The industries are farming, fruit growing and lumbering. Wheat yields from 35 to 50 bushels an acre, oats from 35 to 75 bushels, and barley, rye, hay, potatoes and other vegetables make large yields. The logging camps and lumber mills furnish home markets for farm produce.

On both shores of Flathead lake there are fine farming and fruit growing districts, and south of the lake is the former Flathead reservation, which was opened in 1910. The climate is excellent and it is never very hot nor very cold. Kalispell is 2,965 feet above sea level; the annual precipitation is 15.45 inches and crops grow without irrigation.

Many varieties of apples are successfully grown; a mature orchard will yield 500 boxes an acre and a box will sell at from $1.25 to $1.75. Crab apples are raised in abundance and often pay better than the regular apple. Probably the most profitable crop raided is cherries, and especially the large sweet cherry. Fruits mature in any part of the valley, but the lake shore is a favored spot owing to the equalizing influence on the atmosphere of a large body of water and because the residents have become fruit specialists. Orchards are free from pests and a wormy apple is unknown.

The country is adapted, not only to diversified farming and fruit growing, but to dairying and truck farming, and its natural resources, when developed, will support a dense rural population.

The southern portion of the county, that embraced in the former Flathead Indian reservation, has been handicapped by lack of transportation facilities, but a branch line of the Northern Pacific, running north from Dixon on the main line to Ronan and Polson, now under construction, will be completed early in 1917, and it is confidently predicted that when this road is built this region will experience rapid development.

The country is rich in water power. Immense power is available in the Flathead river at Polson, which is to be used for pumping water for irrigation and to furnish power for other purposes.

Polson, the principal port on the south shore of Flathead lake, is the shipping point for a large and productive part of the Flathead reservation. It is a thriving town, having grown from nothing to be an incorporated town with a population of 2,000 in six years. It has city improvements, good schools, churches, banks, large business houses, electric lights, telephones, a weekly newspaper and steamboat service to all points on the lake. A five story brick flouring mill, having a daily capacity of 200 barrels of flour, was erected in 1912 and adjoining it is an elevator of 30,000 bushels capacity. On the shore of the lake, near the docks, the Farmers' elevator, having a capacity of 35,000 bushels of grain, has been constructed. A large warehouse has been built at the docks and the grain storage capacity of Polson is about 100,000 bushels. The Northern Pacific branch line, Dixon to Polson, a distance of 33 miles, is now under construction.

The population of Flathead County is estimated at 22,127 and the assessed valuation is $12,174,107.

Land Area—Flathead County, which is in the Kalispell and Missoula land districts, embraces an area of 6,380 square miles, including 66,475 acres of unreserved and unappropriated public land available for entry under the homestead law, 115,140 acres of state land, and 2,202,120 acres of national forests. Of the total area of the county, 867,350 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 850,000 bushels; oats, 1,700,000 bushels; barley, 125,000 bushels; corn, 4,000 bushels; potatoes, 265,000 bushels; hay, 35,000 tons; apples, 75,000 bushels; cherries, 5,000 bushels; strawberries, 60,000 quarts; raspberries, 80,000 quarts; currants, 12,000 quarts.

In 1915, the assessor's rolls showed the following livestock: Horses, 6,277 head; milch cows, 3,137 head; other cattle, 6,404 head; sheep, 4,146 head; swine, 2,084 head.

Gallatin County

Gallatin County was one of the original counties created in 1865 by act of the legislature of the newly created territory of Montana. It was named for the Gallatin river, which was discovered by Lewis and Clark in 1805 and named after Albert Gallatin, who was Secretary of the Treasury in President Jefferson's administration. It has given freely of its territory to form other counties and is now a relatively small county. The southern part of the county extends to the Yellowstone National Park and is a mountainous region pierced by the West Gallatin river, into which flow numerous smaller streams. The mountains are covered by forests, interspersed with parks, and there are several large basins of open country where the native grasses are abundant and afford a splendid summer range for livestock. Excellent coal has been found in this section and there are deposits of copper and asbestos. This part of the country is a favorite resort for the camper, the fisherman and the hunter, and it is entered by a good road, which extends from the Yellowstone National Park, follows one of the most beautiful streams in America, passes through picturesque canyons, through forests and parks and basins and around the bases of mighty mountain peaks.

The cultivated area is among the foothills which descend from the mountains surrounding the valley, and in the Gallatin valley proper, an extensive region of wonderful fertility. The valley lands are irrigated from the waters of the West Gallatin river or tributary streams, while on the benches and foothills farming is usually carried on without irrigation. The irrigated and unirrigated lands under cultivation are about of equal extent, but every year there is an increase in the number of acres of land farmed without irrigation due to the breaking and cultivation of tracts on the foothills that have been used heretofore for grazing. While there is no chance to file on public land in the valley or the adjacent foothills, there are splendid opportunities to buy land of remarkable fertility at low prices, considering its productiveness.

The Gallatin valley has been called "The Egypt of America" and Gallatin County was the pioneer county to make farming the main industry of its inhabitants. The annual products of its farms are probably of greater value than those of any other county in the state.

The average production of grain per acre is believed to be unequalled in any county in the United States. Reports collected from 192 irrigated grain fields, embracing 14,000 acres, gave an average crop of 58.2 bushels an acre and $38.28 as the average returns per acre. The average yield of oats was 76.4 bushels, barley, 58.7 bushels; wheat; 44.2; and potatoes 291.5 bushels. From 76 non-irrigated grain fields, embracing 7,490 acres, the

A TYPICAL MONTANA WHEAT FIELD

average yield was 42 bushels and the average value of the crop $35.39 an acre. Both irrigated and non-irrigated lands show a money return by the acre that supports the claim that no county in the United States is known where farming is so profitable as in Gallatin County, Montana.

The quality of the grains has caused them to be in great demand for seed and for shipment to flouring, cereal and malt mills. Barley has been shipped to Europe, Japan and Australia.

A new industry, which promises to be remarkably successful and profitable, is the growing of seed peas under contracts with seed houses. The soil and climate are ideal for the production of peas of the highest grade, and the pea crop should net the grower not less than $40 an acre.

Strawberries and raspberries make great yields and are in demand in the towns of the county and in Butte and other Montana cities. All hardy vegetables yield amazingly, the celery being of exceptional quality. Hardy apple trees make large yields of excellent fruit. Dairying is an important and increasing industry, and from the sale of eggs and chickens large sums are derived. Hogs thrive on alfalfa and cow peas and sell at profitable prices. There are many horses of excellent grade and beef and dairy cattle of the best types. No farming district in the Northwest has greater advantages and no farming community is more prosperous.

The county is served by the Northern Pacific Railway. The main line of the Northern Pacific crosses the county from the Bozeman tunnel to Logan and thence to Lombard; the Butte line from Logan passes west through Jefferson valley; and from Manhattan a branch line has been built to Anceney in the Camp Creek country; at Mountainside, a railroad comes in from the Tail Creek coal fields.

The chief towns are Bozeman, Three Forks, Belgrade and Manhattan. Less than six years old, Three Forks, with two railroads, a population of 2,000, has large business houses, many civic improvements and, a growing busy little city, is an example of how towns grow in developing Montana. Manhattan is a milling and shipping point for a productive section. Salesville, in the southern part of the county, is an important grain shipping point. Belgrade is a thriving town in the center of the valley, has large flour mills and elevators and ships great quantities of grain. Logan is a trading place for the lower Madison valley and is an important junction point on the Northern Pacific Railway. At Trident, on the Northern Pacific, is a large cement factory.

The county seat is Bozeman, "the beautiful," a city modern in every respect, with fine residences, surrounded by beautiful lawns and shade trees, churches, schools, business blocks, mills, and elevators. The population in 1910 was 5,107. The city owns the water works; there are sewers, a paid fire department, paved streets, many miles of cement sidewalks, parks, street car lines, and the grounds of the Interstate Fair Association. The

Montana Agricultural College and Experiment Station, the United States local land office, and the United States Fish Hatchery are located at Bozeman. It is a beautiful residence and educational city and an important business place. There are flouring mills, a cereal food factory, several elevators, a brewery and numerous small factories. Every year in September Bozeman gives a "Sweet Pea Carnival," a unique festival that attracts thousands of visitors.

The population of Gallatin County is estimated at 18,516, and the assessed valuation is $16,724,404.

Land Area—Gallatin County, which is in the Bozeman land district, embraces an area of 2,529 square miles, including 10,650 acres of unreserved and unappropriated public land available for entry under the homestead law, 54,976 acres of state land, and 840,418 acres of national forests. Of the total area of the county, 788,419 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat 3,350,000 bushels; oats, 2,500,000 bushels; barley, 500,000 bushels; corn, 12,000 bushels; potatoes, 195,000 bushels; hay, 87,000 tons.

In 1915, the assessor's rolls showed the following livestock: Horses, 11,769; milch cows, 3,562 head; other cattle, 14,258 head; sheep, 14,185 head; swine, 4,998 head.

Granite County

In 1893, Granite County was created from the western part of Deer Lodge County. It lies east of the Bitter Root valley and much of its territory is mountainous. The slope of the land is from the high mountains in the south to the Hellgate river in the north. In the mountain area is much beautiful scenery, excellent hunting and streams in which trout are abundant, and there is also much timber.

Granite County achieved a world wide reputation as a rich mineral district more than a score of years ago. Out of the great Granite-Bimetallic mine it is said that more than $40,000,000 in silver and gold have been taken, the production of other mines swelling the total to $50,000,000. While the famous mines of generations ago are not now producing in large quantities, it is probable that there remains in them and in undeveloped prospects in the many mineral districts, ores worth many millions of dollars. Prospectors continue to search for new deposits, leasers are working in old mines, and many small mines are operated by individual owners or by companies. The outlook is for an improvement in the mining industry in all districts and for the swift development into a great producing camp, of the Georgetown lake country into which has been extended the Butte, Anaconda and Pacific Railway.

In the West Fork district of Granite County, great quantities of sapphires have been mined. The stones which are found in gravel deposits from which they are taken by hydraulic mining, are of value, as gems when of the first quality and as abrasives when of inferior grade.

Much attention has been paid to the breeding of improved strains of horses and cattle. Belgian, Percheron, Shire, and standard bred stallions have sired young horses that have sold for high figures. At least one-half of the range cattle are of Hereford stock.

The county has convenient markets for its products in Missoula, Anaconda and Butte. The Flint Creek valley has peculiar advantages for successful dairying, and creameries at Phillipsburg and Hall produce large quantities of excellent butter and other dairy products which have won many prizes at the Montana State Fair and at other expositions.

The valleys of Flint and Rock Creeks and Hellgate river contain many acres of irrigated lands that yield profuse crops of grains and grasses. Flint Creek valley, extending from Drummond to Phillipsburg, embraces the most productive agricultural section. The soil is alluvial, rich and deep, and convenient railroads transport grain, grasses and vegetables to the market close at hand. Oats make large yields and crops of 75 to 100 bushels an acre are not uncommon. In Rock Creek valley are many fine ranches. The average production of grain is high, but hay is the chief crop. Hellgate valley has an easterly and westerly trend and a width, in places, of more than a mile of rich alluvial soil. The Northern Pacific Railway runs through it, and its productive lands offer advantages that are equalled at few places.

The advantages of the county for fruit growing are attracting attention. The suitability of the soil and climate for the successful production of fruits on a commercial scale is shown by several orchards.

Philipsburg, the county seat and principal town, and the terminus of a branch line of the Northern Pacific Railway, had a population of 1,109 in 1910, occupies a commanding position upon the terrace of Flint Creek valley, has excellent drainage, a good water system, an electric lighting plant, a court house, handsome homes, good hotels, business houses, a bank, a creamery, a foundry, a brewery and a weekly neswpaper.

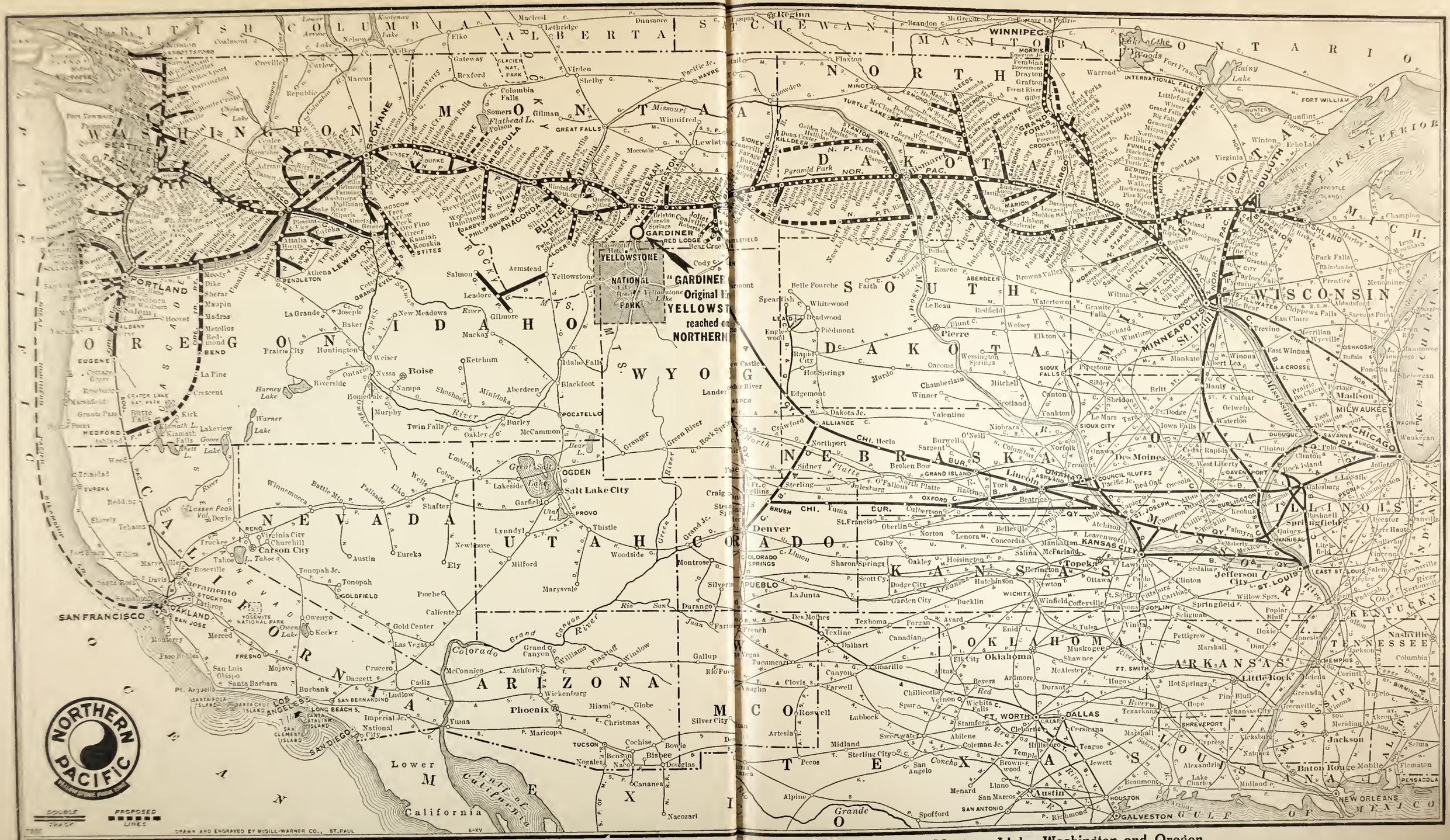
The public schools of Philipsburg and the Granite County high school afford excellent opportunities for obtaining a good education. Hall, in the Flint Creek valley, is in the center of a prolific farming section, has an up-to-date creamery, a number of business establishments, is within easy reach of lignite coal mines, and controls the trade of a populous farming district. Drummond, on the main line of the Northern Pacific Railway where the Philipsburg branch begins, is the trading place for the northern end of the county, has mercantile houses, a newspaper, and men who will be glad to tell of the advantages the neighboring country has to offer to the homeseeker.

Granite County has an estimated population of 3,426, and an assessed valuation of $3,681,090.

Land Area—Granite County, which is in the Helena and Missoula land districts, embraces an area of 1,728 square miles, including 198,948 acres of unreserved and unappropriated public land available for entry under the homestead law, 17,202 acres of state land, and 718,094 acres of national forests. Of the total area of the county, 257,490 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 75,000 bushels; oats, 450,000 bushels; barley, 25,000 bushels; potatoes, 65,000 bushels; hay, 34,000 tons.

[*Continued on page 34*]


BRITISH COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
ONTARIO
WASHINGTON
OREGON
CALIFORNIA
NEVADA
IDAHO
MONTANA
WYOMING
UTAH
COLORADO
ARIZONA
NEW MEXICO
NORTH DAKOTA
SOUTH DAKOTA
NEBRASKA
KANSAS
OKLAHOMA
TEXAS
MINNESOTA
IOWA
MISSOURI
ARKANSAS
LOUISIANA
WISCONSIN
ILLINOIS
MICHIGAN
INDIANA
KENTUCKY
TENNESSEE
MISSISSIPPI
ALABAMA
GEORGIA
FLORIDA
SOUTH CAROLINA
NORTH CAROLINA
VIRGINIA
WEST VIRGINIA
PENNSYLVANIA
NEW YORK
MAINE
VERMONT
NEW HAMPSHIRE
MASSACHUSETTS
RHODE ISLAND
CONNECTICUT
NEW JERSEY
DELAWARE
MARYLAND
"GARDINER Original Entrance YELLOWSTONE NATIONAL PARK reached only by NORTHERN PACIFIC"
YELLOWSTONE NATIONAL PARK
Mammoth Hot Springs
Cody
Gardiner
Red Lodge
Billings
Livingston
Bozeman
Butte
Anaconda
Helena
Missoula
Spokane
Seattle
Tacoma
Portland
Salem
Eugene
Medford
Astoria
Lewiston
Pendleton
Walla Walla
Boise
Pocatello
Idaho Falls
Twin Falls
Ogden
Salt Lake City
Provo
Reno
Carson City
Virginia City
Tonopah
Goldfield
Sacramento
San Francisco
Oakland
San Jose
Fresno
Los Angeles
San Bernardino
Long Beach
San Diego
Phoenix
Tucson
Yuma
Flagstaff
Winslow
Williams
Grand Canyon
Colorado River
Gallup
Albuquerque
Santa Fe
Las Vegas
Roswell
Amarillo
Pueblo
Colorado Springs
Denver
Cheyenne
Laramie
Rawlins
Rock Springs
Green River
Evanston
Ogden
Grand Junction
Durango
Silverton
Montrose
Gunnison
Leadville
Aspen
Glenwood Springs
Craig
Steamboat Springs
Fort Collins
Greeley
Boulder
Colorado Springs
Pueblo
La Junta
Dodge City
Garden City
Liberal
Guymon
Texhoma
Dalhart
Clovis
Roswell
Artesia
Carlsbad
Pecos
Midland
Odessa
Sweetwater
Abilene
Wichita Falls
Vernon
Quanah
Childress
Paducah
Lubbock
Plainview
Amarillo
Canyon
Tucumcari
Las Vegas
Santa Fe
Albuquerque
Gallup
Farmington
Durango
Silverton
Montrose
Grand Junction
Green River
Rock Springs
Evanston
Ogden
Salt Lake City
Provo
Price
Vernal
Duchesne
Roosevelt
Craig
Steamboat Springs
Hayden
Meeker
Rangely
Grand Junction
Delta
Montrose
Gunnison
Leadville
Aspen
Glenwood Springs
Eagle
Vail
Breckenridge
Fairplay
Salida
Canon City
Pueblo
Trinidad
Raton
Las Vegas
Santa Fe
Albuquerque
Gallup
Farmington
Durango
Silverton
Ouray
Telluride
Dolores
Cortez
Mancos
Monticello
Blanding
Bluff
Mexican Hat
Kayenta
Tuba City
Flagstaff
Winslow
Holbrook
Show Low
Springerville
Eagar
St. Johns
Concho
Snowflake
Taylor
Holbrook
Winslow
Flagstaff
Williams
Grand Canyon
Kingman
Needles
Barstow
Victorville
San Bernardino
Los Angeles
Long Beach
Santa Ana
San Diego
Oceanside
San Clemente Island
Santa Catalina Island
Santa Cruz Island
Santa Rosa Island
Anacapa Island
San Miguel Island
Santa Barbara
Ventura
Oxnard
Port Hueneme
San Luis Obispo
Paso Robles
Salinas
Monterey
San Jose
Oakland
San Francisco
Sacramento
Stockton
Modesto
Merced
Fresno
Visalia
Bakersfield
Mojave
Lancaster
Palmdale
Indio
Palm Springs
Blythe
Yuma
Gila Bend
Ajo
Nogales
Douglas
Bisbee
Tombstone
Benson
Willcox
Safford
Globe
Miami
Superior
Casa Grande
Florence
Coolidge
Eloy
Maricopa
Phoenix
Wickenburg
Prescott
Jerome
Clarkdale
Cottonwood
Sedona

SOME MONTANA CORN FED HOGS READY FOR MARKET

[*Continued from page 31*]

In 1915, the assessor's rolls showed the following livestock: Horses, 4,077 head; milch cows, 906 head; other cattle, 11,817 head; sheep, 18,807 head; swine, 1,058 head.

Jefferson County

Jefferson, one of the original counties of the territory, lies on the eastern slope of the Rocky Mountains and is separated from the Missouri River valley by parallel ranges of which Elkhorn mountains form a part. From the mountains in the western, northern and eastern boundaries, the ground slopes to the Jefferson valley where the lowest elevations are found. Many mountain streams unite to form the Boulder river, which rises in the northwestern part, flows east for a number of miles and thence south to the Jefferson river with which it unites at Jefferson Island. The northwestern part of the county is drained by Prickly Pear creek, which flows into the Missouri river near Helena. The southern boundary, for the greater part, is the Jefferson river.

Mining is the principal industry, stock growing and farming being next in importance. Nearly all of the mountains that comprise a great part of the county are mineralized and scores of millions of dollars have been extracted from the mines. There are thousands of mineral claims and many producing mines. Mining is active in the Corbin-Wickes neighborhood, where great sums have been spent in the last few years in development work in mines, and at Clancy, Boulder, Basin, Amazon and other places.

Stock growing has been an important and prosperous industry from early days. The native grasses furnish good food, little winter feeding is necessary, and many horses and cattle are shipped every year. In the mountains are large areas of good grazing lands that are not adapted for farming and the permanency of the stock industry is assured.

The area devoted to farming increases yearly. Farming without irrigation has been successful in many cases, but the chief production is from irrigated lands in the Jefferson and Boulder valleys. The Jefferson valley, about 35 miles long, extends from the canyon on the east to Waterloo on the west and embraces Jefferson Island. Whitetail Deer, Fish and Pipestone creeks water this section, which contains many fine farms. The Boulder river has a long valley in which are situated many productive grain and stock ranches. Prickly Pear valley has the advantage of being near Helena.

Oats, winter wheat, rye and hay are the chief crops. Irrigated oats yield from 25 to 50 bushels an acre and a bushel often weighs 44 pounds. Winter wheat and rye yield from 30 to 50 bushels an acre on irrigated, and from 15 to 40 bushels on non-irrigated land.

Native grasses make excellent hay, and alfalfa yields from three to six tons to the acre. For butter, eggs, vegetables and fruits the many mining camps supply a market and the markets of Butte and Helena are in part supplied from this county. Diversified farming is pursued by many and dairying is profitable. Hardy apples produce abundantly. Excellent opportunities are present for the farmer, fruit grower, dairyman and gardener, as well as for the capitalist who will help to develop mines, and the stock grower. In addition to precious metals there are deposits of limestone and cement rock. The excellent granite that was used to construct the wings of the State Capitol was quarried in Jefferson County, only ten miles from Helena. In the limestone formation, north of Jefferson canyon, is a wonderful Lewis and Clark cavern, one of the most beautiful and extensive caves in America and now a National Monument cared for by the Government.

Boulder, the county seat, is situated in the central part of the county, thirty-seven miles from Butte, and thirty-five miles from Helena. It is a thriving town with good schools, churches, banks, business houses, a newspaper and many attractive residences. It is the home of the State School for the Deaf and Blind.

Whitehall is the chief trading point in the southern part of the county and of the Jefferson valley. It had a population of 417 in 1910 and is perhaps the most populous town. It is a railroad junction point, has good schools, churches, and large business establishments. Piedmont, a new town, is in a good farming section. Many orchards have been planted, and vegetables are extensively grown. Basin, in a mining region, is where the Heinze mill and reduction works are situated and has commercial establishments, churches and schools. Clancy is in a prosperous mining and agricultural region. Corbin and Wicks are centers of mining activity. Elkhorn is where the famous Elkhorn group of mines is located.

In Jefferson County are four noted mineral springs which are visited by many invalids who are benefited by the waters, and by many others in search of recreation. Alhambra and Sunnyside are near Helena; Boulder Hot Springs are near the county seat. Pipestone Springs, on the main line of the Northern Pacific Railway, 26 miles from Butte, is a favorite resort.

Jefferson County enjoys the advantage of being close to the cities of Butte and Helena, where farm products may be marketed and to which ores may be shipped for treatment at smelters. The average of wealth and the production per capita are high, and there are attractive opportunities for the homeseeker and the capitalist to acquire land at its present low valuation, for farming or fruit growing, and to purchase interests in mining properties that need the expenditure of capital to develop them into producing mines.

The estimated population is 5,695 and the assessed valuation is $6,215,035.

Land Area—Jefferson County, which is in the Helena land district, embraces an area of 1,642 square miles, including 125,146 acres of unreserved and unappropriated public land available for entry under the homestead law, 28,840 acres of state land, and 482,267 acres of national forests. Of the total area of the county, 307,609 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 150,000 bushels; oats, 425,000 bushels; barley, 10,000 bushels; potatoes, 80,000 bushels; hay, 28,000 tons.

In 1915, the assessor's rolls showed the following livestock: Horses, 4,049 head; milch cows, 1,576 head; other cattle, 12,715 head; sheep, 2,900 head; swine, 795 head.

Lewis and Clark County

One of the oldest and wealthiest counties in Montana is Lewis and Clark County. Under the name of Edgerton, it was one of the original counties of the territory, the name afterwards being changed to keep in remembrance the famous explorers of 1804-6. It was the scene of many events of historical interest in pioneer days, and Helena, the town which grew up around the placer gold diggings of Last Chance gulch and became the financial commercial and mining center of the state, was fittingly selected as the territorial capital and as the seat of government of Montana after its admission into the Union as a state.

Nearly all the population and the greater part of the area of Lewis and Clark County are on the eastern side of the Rocky Mountains, the land sloping from high mountains to the Missouri river which runs through the county in a northerly direction and receives several important tributaries. A considerable area in the northern part of the county is in the Sun river drainage basin. The Prickly Pear valley, adjacent to Helena, and the Sun River valley, embrace most of the land that is under cultivation.

On the western slope of the Rockies is a sparsely settled and mountainous part of the county in which are several mining districts. The drainage is mainly into the Big Blackfoot river, and the greater part of this region is included in national forests.

Mining, stock growing and farming are the occupations of the country residents, and commercial and manufacturing pursuits employ large numbers in the cities. The county embraces a very extensive and rich mineral belt and mining has been successfully carried on since 1864, when the wonderfully rich placers of Last Chance Gulch, now included within the limits of Helena, were discovered. Many other places were productive, and every year a considerable quantity of placer gold is still recovered. Much land that could be profitably worked with a gold dredge will, it is thought, be found on exploration. Near Lincoln, on the west side, are placer grounds that have been yielding gold for many years. Mines at Unionville, a few miles south of Helena, have produced many million dollars' worth of gold. The Spring Hill and other great mines are in this neighborhood. During the past few months two producing mines have been opened in the Scratch Gravel district, three miles north of Helena, and many prospects are now being developed in this district. In either direction from Helena, mining camps are found only a few miles apart. The principal mining town is Marysville where many large mines are producing. It is reached by a branch line of the Northern Pacific from Helena, 21 miles distant. Gould is an established mining camp in the same section. A branch line of the Northern Pacific Railway extends to Rimini, 18 miles from Helena, which is a shipping point for an extensive mineral territory in the southwestern part of the county.

WHEAT IN SHOCKS, BEAVER VALLEY, WIBAUX COUNTY

To treat the ores of this and adjoining counties, the American Smelting Company operates a smelter at East Helena, where a large number of men are employed. East Helena is a considerable town which is connected with Helena by an electric railway and two steam railroads.

Stock growing has been a leading industry from early days, and the fattening of beef cattle in the Prickly Pear valley for shipment to distant markets is a branch of the business that is becoming important.

The chief agricultural districts are in the valleys of the Prickly Pear and Missouri rivers near Helena, and in the northern part of the county from the Dearborn to the Sun rivers. Farming development has been stimulated in the country near Helena by the recent completion of a large irrigation project. Much land, in what is known as the Helena valley, is also farmed by non-irrigated methods. Fruits also grow successfully and several orchards have been set out. Soil and climatic conditions are favorable for the Prickly Pear valley becoming a great fruit district. For farm products of all kinds, especially for vegetables and for fruits, the city of Helena and the adjacent mining camps will provide markets, the local production at present falling far below the local demands.

The enormous power that is generated at the electric power plants on the Missouri river is used in part to pump water from Hauser Lake to irrigate about 30,000 acres of land within a few miles of Helena. The agricultural development of the country near Helena, caused both by the extension of cultivation of unirrigated lands and by the large increase in the acres under irrigation, promises to be rapid. In the past three years, many new settlers who have gone into the northern part of the county have broken and planted many acres of raw land; older settlers have increased the number of acres under cultivation on their farms, and this part of Lewis and Clark County will soon become a very productive farming district.

Helena, the county seat, is the capital of Montana and is a commercial, financial and political center. The population in 1910 was 12,515. It is an attractive place for residence and is said to be the richest city per capita in the United States. Costly private residences and large business blocks testify to the wealth of the inhabitants.

Helena is the center of many religious activities. The Episcopal Bishop of Montana, the Resident Bishop of the Helena area of the Methodist Episcopal church, the Bishop of the Roman Catholic diocese of Helena, and official leaders of other denominations reside in the city. Hospitals, asylums and benevolent institutions are numerous. It is an educational center, having an excellent public school system, and many denominational schools. By the aid of friends in Helena and at other places a large endowment fund has been raised for the Montana Wesleyan University, a long established institution which has secured

handsome grounds, not far from the Capitol, upon which will be erected a group of fine buildings. The Deaconess School for young children is a useful institution which is located a few miles from the city. The Catholic church has parochial schools, graded schools for boys and girls, a high school occupying a $500,000 building; St. Vincent's Academy, a school for girls, conducted by the Sisters of Charity, which has been in existence for many years and has a large attendance; and Mt. St. Charles College for boys, which was opened in 1911, and has splendid buildings. One of the most beautiful church buildings in America is the new St. Helena Cathedral recently completed.

The capitol, a splendid building, costing $1,100,000, contains the offices of various state executive officials, the supreme court, and the chambers of the two branches of the legislative assembly. The Montana State Fair is held every year on grounds near the city and is attended by many thousand visitors. The federal courts meet in Helena and the chief federal officers for the state have offices in the city. A United States assay office and the land office for the Helena district are located here, as are also the headquarters of the engineer in charge of the government reclamation work in Montana.

Helena has all of the advantages and conveniences that are to be found in a modern and progressive city, with public, business, and residence buildings that compare favorably with those of any city, whatever its size, and has some advantages peculiar to itself, such as the largest natatorium in the world and one of the greatest developments of water power on the continent. Two immense dams and generating plants have been completed and a third is under construction. The three dams develop a total head of 220 feet and will make available 100,000 horse power. This abundant and cheap power is available for use on the farm and in the mines, is transmitted in large quantities to Butte, and is an advantage for manufacturing plants that few cities possess. This almost unequalled power, the location of the city near districts that produce large quantities of grain, and the excellence of the railroad facilities, are expected to make Helena a flour milling center as well as to impel other manufacturing establishments to be started. Helena is an important jobbing center and goods are shipped to all parts of the state. The manufactures are crackers, candies, soap, spices, extracts and baking powders, brick and clay products. There are two breweries, an iron foundary and planing mills. There are two daily newspapers and five large printing establishments.

Helena is a railroad center, being on the main line of the Northern Pacific and the place from which the Rimini, Elkhorn and Marysville branches of that system start.

Lewis and Clark County abounds with opportunities in farming, fruit growing, mining and manufacturing, and is on the eve of great growth in all these lines.

The population is estimated at 24,410, and the assessed valuation is $24,151,849.

Land Area—Lewis and Clark County, which is in the Helena land district, embraces an area of 3,476 square miles, including 551,517 acres of unreserved and unappropriated public land available for entry under the homestead law, 112,089 acres of state land, and 863,147 acres of national forests. Of the total area of the county, 668,929 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 200,000 bushels; oats, 750,000 bushels; barley, 50,000 bushels; flax, 10,000 bushels; potatoes, 350,000 bushels; hay, 56,000 tons.

In 1915, the assessor's rolls showed the following livestock: Horses, 6,116 head; milch cows, 1,161 head; other cattle, 20,518 head; sheep, 137,000 head; swine, 1,476 head.

Madison County

Madison County is situated in the southern part of the state, having Idaho as its southern boundary. It was one of the original counties created by the territorial legislature and one of the sixteen counties existing when the constitution of the state was adopted. Virginia City was the territorial capital and was the scene of many notable events in pioneer days.

It contains Alder gulch, discovered in 1863, which has produced more gold than any other similar area in the world and is still producing. At the mouth of the gulch are the large dredges of the Conrey Company which handle at large profit great quantities of gold bearing dirt. Quartz mining followed placer mining, and Madison has produced more gold than any other county in the state. Frequently it leads in the monthly reports of gold production. The greater part of the county is in a mineralized region and numerous mining camps exist. Silver Star, Iron Rod, Twin Bridges, Rochester, Sheridan, Virginia City, Pony, Norris and Red Bluff are towns that are surrounded by rich mining districts. In addition to gold, silver, copper and lead there are ores of tungsten, iron and manganese, pure limestone and coal. Sapphires and rubies are found in placer diggings. In the numerous mining districts are many good opportunities for the prospector, the miner and the capitalist.

Mining, stock growing and farming are the three leading industries. Some of the best bred horses, cattle and sheep in the United States are in this county. Fine herds of cattle are numerous, and much attention has been paid to improving the breeds of sheep. Horses, cattle and sheep are shipped in large numbers each year and sell at prices that prove their quality.

Madison County contains timbered mountain ranges, long, rapid rivers, extensive and fertile valleys, and is watered by the Madison, Jefferson, Ruby, Beaverhead and Big Hole rivers and their numerous tributaries. An immense quantity of hydro-electric power is available, part of which is being utilized by the Madison River Power Company which has built, seven miles from Norris, a dam across the Madison river and established a large plant that generates 20,000 horse power the year around. The power is transmitted to several points in the state, to Butte and Anaconda on the west, and to Bozeman, Livingston, Billings and other places on the east.

A mountain range forms the eastern boundary, another is in the center, and a third in the western part. The chief agricultural districts are in the valleys and between the ranges. The Jefferson valley extends from the northern boundary to Twin Bridges, where the river is formed, and embraces in its own drainage basin and those of the South Boulder and Willow Creek a great extent of excellent farm land. South of Twin Bridges are the Beaverhead and Ruby valleys, the former about 15 miles long and five miles wide, and the latter about 30 miles long and from one to three wide. The extensive area in these valleys contains many

ONE OF MONTANA'S DAIRY HERDS, NEAR HELENA

highly improved and very productive farms. The trading points are Waterloo, Twin Bridges, Sheridan, Laurin and Alder. A part of the Willow Creek valley is in Gallatin County, but the upper part is in Madison County and extends to Pony and Norris. South of Norris is the Madison valley, about 36 miles long, and, including the bench lands, about five miles wide. Large crops of oats, wheat and hay are raised. Meadow Creek, McAllister, Ennis, Jeffers, Cameron and Lyon are postoffices in this valley, which has room for at least five times its present farming population. Many excellent stock ranches are in this section.

In the valleys are irrigated areas and on the benches farming without irrigation has been successful. Several projects are pending that will increase the acreage of irrigated lands and some of the large ranches are being subdivided and sold in farm lots.

The county is sparsely settled and offers good advantages to the homeseeker who desires to secure farming and fruit lands by purchase at low prices. The markets of Butte and Anaconda are convenient, and fruits, dairy products, eggs and chickens are always in demand.

The principal towns are Virginia City, the county seat, an important commercial and mining center, a rich town and of great historic interest, having been the territorial capitol; Pony, a mining town and trading point for the Willow Creek country; Sheridan, a pretty, thriving town, surrounded by rich farm lands and near producing mines; and Twin Bridges, which is situated at the head of Jefferson valley near the confluence of the Ruby, Beaverhead and Big Hole rivers and at the outlet of the valley of those rivers. Twin Bridges possesses a favorable location for growth in size and business importance and undoubtedly has a very bright future before it.

The State Orphan's Home is at Twin Bridges and occupies buildings that have been erected at the cost of $110,000. It has numerous inmates and is well supported by appropriations for its maintenance.

The Northern Pacific has a branch line extending from Whitehall to Alder and another from Sappington to Pony and Norris.

The population of Madison County is estimated at 8,860, and the assessed valuation is $7,493,144.

Land Area—Madison County, which is in the Helena and Bozeman land districts, embraces an area of 3,588 square miles, including 686,032 acres of unreserved and unappropriated public land available for entry under the homestead law, 121,698 acres of state land, and 839,382 acres of national forests. Of the total area of the county, 565,184 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 300,000 bushels; oats, 1,200,000 bushels; barley, 65,000 bushels; potatoes, 450,000 bushels; hay, 95,000 tons.

In 1915, the assessor's rolls showed the following livestock:

Horses, 9,811 head; milch cows, 1,280 head; other cattle, 26,878 head; sheep, 131,728 head; swine, 2,836 head.

Mineral County

Mineral County is one of the newest counties in the state, having been created from the extreme western portion of Missoula County in August, 1914. This county, which is generally composed of picturesque ranges of mountains, is cut in two by the swift flowing Clark Fork of the Columbia river, and contains one of the longest and most fertile valleys of the state, although the valley, in many places, is very narrow. Back of this valley there are, in places, bench lands which have been found to be very productive, and the county, although very backward in the past, is now experiencing a healthy agricultural growth.

Lumbering and mining are, however, the chief industries of this section of the state. At St. Regis is located one of the largest saw mills in the state and at Henderson another mill is in operation. The region west of St. Regis is heavily timbered and will furnish work for logging crews for many years to come.

Superior, the county seat and principal town, is a rapidly growing, progressive place. Its location is extremely picturesque, being on the Clark Fork river with towering mountains on either side. The town now has an estimated population of 450, and boasts one bank, with more than $100,000 deposits, eight retail stores, one theatre, and two weekly newspapers.

Along the Clark Fork river, in Mineral County, it is estimated that 20,000 horse power can be developed and the development of this power will undoubtedly give a strong impetus to the industrial life of this section of the state.

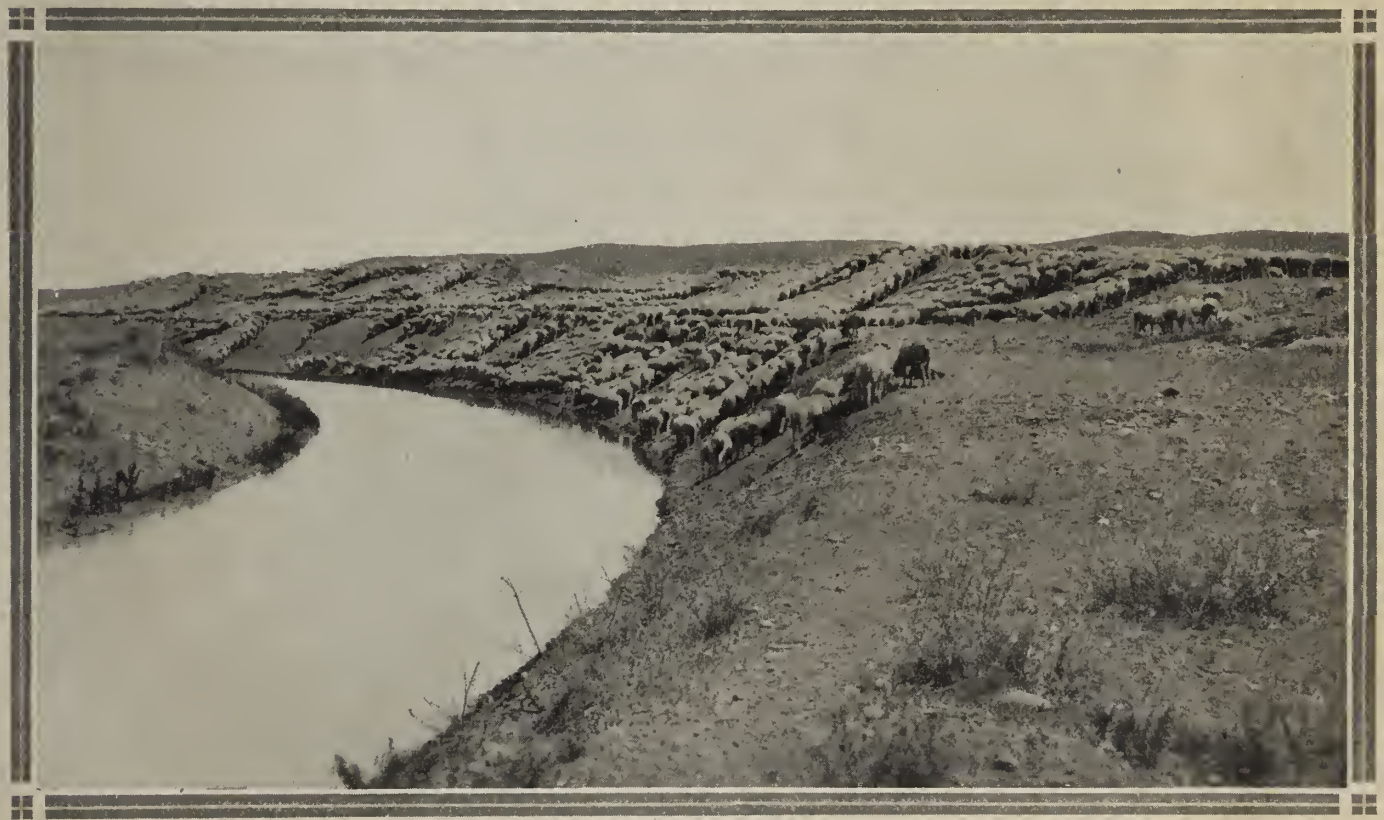
There has been renewed activity in mining in this county during the past few months and at the present time more than 400 men are employed on properties adjacent to Superior.

Mineral County offers unusual inducements to tourists. There is magnificent scenery and the best of hunting and fishing may be found within easy access of the railroads.

In the development of the county, it seems probable that dairying will soon play an important part. The excellent pasturage which the cut-over lands of the county furnish, together with the purest of water and a never failing market for dairy products, tend to make dairying very remunerative along the Clark Fork, and this industry promises to enjoy much growth in the near future.

The estimated population of Mineral County is 2,618, and the assessed valuation of the county, in 1915, was $4,035,177.

Land Area—Mineral County, which is in the Missoula land district, embraces an area of 1,224 square miles, including 59,248 acres of unreserved and unappropriated public land available for



SHEEP IN THE LOWER YELLOWSTONE VALLEY, MONTANA, PRODUCED 29,000,000 POUNDS OF WOOL IN 1915

THE PRODUCT OF THE CHERRY CREEK STOCK RANCH, NEAR BOZEMAN

entry under the homestead law, 26,285 acres of state land, and 875,000 acres of national forests. Of the total area of the county, 171,784 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 10,000 bushels; oats, 75,000 bushels; barley, 20,000 bushels; potatoes, 45,000 bushels; hay, 12,000 tons.

In 1915, the assessor's rolls showed the following livestock: Horses, 618 head; milch cows, 207 head; other cattle, 351 head; sheep, 88 head; swine, 331 head.

Missoula County

When the territory of Montana was divided into counties, the extensive country drained by the Bitter Root, Clark Fork and Kootenai rivers was put in Missoula County. The present flourishing counties of Ravalli, Missoula, Sanders, Flathead, Mineral and Lincoln, have been formed from Missoula County, which still retains an extensive area having a large variety of rich natural resources.

The principal industries are farming, fruit growing, lumbering and mining. The principal farming districts are the Bitter Root and Missoula valleys and the recently opened Flathead Indian reservation. South of the city of Missoula, to the boundary line of Ravalli County, extends the part of the wonderful Bitter Root valley which is embraced in Missoula County, and north and west lies the Missoula valley. Around Frenchtown, 17 miles from Missoula, is an old and prosperous farming community. In the Missoula valley average crops are 2½ to 3½ tons of timothy hay to the acre, 2½ tons of clover at the first crop and 2 tons at the second. Great yields of wheat and oats are reported from irrigated lands. On non-irrigated land, wheat yields from 30 to 40 bushels to the acre; oats, 60 bushels; and barley, 45 bushels. Potatoes yield about 250 bushels to the acre; many vegetables are grown and the country is splendidly adapted for dairying and has some dairy cattle of the highest quality. While stock raising is not a leading industry, many head of beef cattle are annually shipped to Montana cities and to Pacific Coast points.

In 1910 the Flathead Indian reservation, the southern part of which is in Missoula County, was opened to settlement. The former reservation is about 60 miles long and about 40 miles wide and contains a million and a half acres. While the greater part of the area is mountainous and grazing land, the agricultural area is very extensive. Mission valley is one of the most beautiful and fertile in the state.

Large yields of grains, grasses, vegetables and fruits are too common in the Bitter Root and Missoula valleys to excite comment, and the reports that come from various neighborhoods

in the Flathead region indicate that a very extensive country is coming into cultivation, which in quantity, quality and variety of product, will rival those of the valleys that have made western Montana famous. In parts of the Mission valley, all the conditions for successful fruit growing on a commercial scale are present. With the coming of the Northern Pacific Railway now assured, a rapid increase in the acreage in cultivation will take place, but remarkable progress has already been made in the short space of six years.

The fruit growing industry is a leading industry in Missoula County and is very profitable. Apples, cherries, plums, pears, berries, peaches in a few places, and grapes at St. Ignatius Mission are grown. Bing and Lambert cherries have been shipped in carload lots to New York. Many varieties of apples are grown, but the McIntosh Red, which is the leading variety, attains perfection. This apple, beautiful in color, excellent in flavor and of good keeping quality, is in demand in all the markets of the world and many carloads are shipped to New York and other eastern points. The apple raising industry is capable of great development and markets for fruits of the first quality should never be lacking.

Lumbering is a very important industry, and the lumber mills at Bonner are among the largest in the Northwest. Smaller mills are numerous.

The towns are Missoula, Bonner, Ravalli and Ronan. Ronan, the chief town in the former Flathead reservation, has a population of 500, is incorporated, has a bank, a newspaper, business houses, and is looking forward confidently to the arrival of the Northern Pacific branch line within a year that will hasten the development of the fertile region of which it is the trading point. Ravalli and St. Ignatius are growing towns in the reservation; at Bonner, six miles east of Missoula where the Big Blackfoot river emerges from a canyon, is an electric power plant and one of the largest lumber mills in the Northwest. An electric railway connects Bonner with Missoula

The city of Missoula is the metropolis of the western part of Montana. It is located at the northern end of the Bitter Root valley which extends south for about 65 miles, has the Missoula valley adjacent to it, is close to the Flathead reservation on the north and to the Big Blackfoot valley on the east. Missoula is a well built, progressive city that has all modern improvements; good public, business and private buildings, banks with large deposits, electric lights and power, street railway, two daily newspapers, numerous large business houses, a number of manufacturing establishments and openings for many more. The western Montana Apple Show is an annual event in Missoula and wonderful displays of Montana fruits are made. The secretary of the State Board of Horticulture, who is also the chief inspector of fruit and fruit trees, maintains an office in the city. The headquarters of the United States forestry service for district number

CORN GROWN ON THE BILLINGS BENCH

HEAVY OATS, GROW ANYWHERE IN EASTERN MONTANA

A MONTANA POULTRY RANCH, MODERN IN EVERY DETAIL

one are also at Missoula, where is also located the United States land office for the district. Fort Missoula is an army post in the suburbs. Missoula is the seat of the University of Montana which, in the few years since its establishment, has grown to be an institution of great usefulness. Missoula is a delightful place of residence and is known as "the Garden City."

. The city is an important railroad point, being on the main line of the Northern Pacific Railway, this road having built extensive passenger and freight stations, large yards, and a payroll that contributes much to the volume of business done. Missoula is connected with the famous Coeur d'Alene mining district of Idaho by a branch of the Northern Pacific that passes through Missoula and Mineral Counties before leaving the state.

The estimated population of the county is 31,569, and the assessed valuation is $16,123,572.

Land Area—Missoula County, which is in the Missoula land district, embraces an area of 3,022 square miles, including 105,595 acres of unreserved and unappropriated public land available for entry under the homestead law, 79,412 acres of state land, and 940,000 acres of national forests. Of the total area of the county, 903,571 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 300,000 bushels; oats, 750,000 bushels; barley, 45,000 bushels; potatoes, 185,000 bushels; hay, 20,000 tons; apples, 80,000 bushels; strawberries, 50,000 quarts; raspberries, 20,000 quarts; currants, 10,000 quarts.

In 1915, the assessor's rolls showed the following livestock: Horses, 5,757 head; milch cows, 2,614 head; other cattle, 9,701 head; sheep, 6,058 head; swine, 3,400 head.

Park County

Park County is one of the southern tier of counties and adjoins the Yellowstone National Park from which it was named. It was created February 23, 1887, from a part of Gallatin County, and some of its original territory is now included in Carbon and Sweet Grass Counties.

The county is watered by the Yellowstone and Shields rivers and their numerous tributaries. In the southern part of the county are high mountains on each side of the Yellowstone valley. The Yellowstone river emerges from the Yellowstone National Park and flows north through several canyons and Paradise valley to Livingston, where it turns to the east. South of Livingston is a long valley of varying width, and on each side are foothills rising to the mountain ranges which contain timber, minerals, much beautiful scenery, and favorite resorts for hunting and fishing. Hunters Hot Springs, east of Livingston in the

Yellowstone valley, and Chico and Corwin springs, south of Livingston near the Yellowstone Park, attract many health seekers, and their waters have valuable curative properties.

The industries are stock raising, farming and mining. The minerals are gold, silver, copper, lead, scheelite, and coal. Emigrant gulch was formerly a producer of placer gold in large quantities and there are quartz mines in the neighborhood. Jardine and Crevasse are mining camps near the Yellowstone Park entrance. The New World mining district, in the high mountain range in the southeastern corner of the county, of which Cooke City is the trading point, is highly mineralized, has been developed to a considerable extent, and needs, it is said, only a railroad to become one of the greatest producing mineral districts in the United States. The developed coal mines are at Aldridge, in the southern part of the county, and at Trail Creek near the Gallatin County line. Marble and gypsum have been found, and also cement rock of superior quality. It is proposed to erect a mill that will manufacture white cement.

Park County has much excellent grazing land on which livestock of an excellent grade is pastured.

The agricultural industry, which is growing rapidly in importance, embraces farming of irrigated lands in the valleys and of unirrigated lands on the benches and in the foothills. The soil is fertile and crop yields challenge comparison with those grown anywhere. Oats, wheat, barley and alfalfa are the chief crops in the irrigated districts and truck farming and fruit growing are also engaged in to a limited extent. All root crops make remarkable yields. On the unirrigated lands, wheat, oats and barley are the leading crops.

The Yellowstone valley, south of the canyon near Livingston, embraces a large and productive farming district and another part of the valley lies east of the city. The largest farming district, however, is the Shields River valley, embracing the northern part of the county and including arable land estimated at 800,000 acres in content. Until the construction, a few years ago, of the Shields river branch line of the Northern Pacific, this vast area of fertile farm land was, except in the lower part, devoted entirely to stock raising. It has been rapidly transformed into farms, but many acres still remain unplowed. Great crops of all grains and grasses are produced in this favored region.

Taking the county as a whole, the average yields of leading crops by the acre are about as follows: Irrigated wheat, 45 to 60 bushels; unirrigated wheat, 25 to 35 bushels; irrigated oats, 70 to 90 bushels; unirrigated oats, 40 to 60 bushels. Many crops exceed these figures. Alfalfa yields from 2½ to 5 tons. About 100,000 tons of hay are annually cut and there is a good demand for all that is not needed for home consumption.

The estimated population of Park County is 12,625, and the assessed valuation is $10,985,589.

Land Area—Park County embraces an area of 2,679 square miles, including 54,660 acres of unreserved and unappropriated public land available for entry under the homestead law, 39,606 acres of state land, and 898,382 acres of national forests. Of the total area of the county, 675,407 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 750,000 bushels; oats, 875,000 bushels; barley, 125,000 bushels; corn, 7,000 bushels; potatoes, 200,000 bushels; hay, 67,000 tons.

In 1915, the assessor's rolls showed the following livestock: Horses, 8,857 head; milch cows, 2,667 head; other cattle, 18,912 head; sheep, 74,925 head; swine, 4,878 head.

Powell County

Powell County lies on the western slope of the Rocky Mountains west of Lewis and Clark and north of Deer Lodge Counties and was organized in 1901. One of the original counties of Montana was Deer Lodge, whose territory has been divided into the four counties of Silver Bow, Deer Lodge, Granite and Powell. Within Powell County are many of the best lands the original county contained, and it has retained as county seat Deer Lodge, which is one of the oldest and most attractive towns in the state.

In 1858, Granville Stuart, an honored pioneer who now lives at Butte, and five companions, made, at Gold creek, in what is now Powell County, the discovery of placer gold which, it is claimed, led to the settlement of Montana. Though unable at the time to work the placer they returned and began work in 1860; the news of their discovery led to the prospecting of other districts, and Bannack and Alder gulch were discovered. Gold seekers in large numbers flocked into the country and a territory was created and named Montana.

The industries are mining, stock growing and farming. The placers have been worked from early days and much gold has been taken from them. On both sides of Deer Lodge valley are quartz mines and mineral claims. Some of the best mining opportunities in any district of the state are to be found in the several mining districts in the upper Ophir and Snow Shoe districts. Near Helmville and Ovando several gold and copper properties have been developed, and in the neighborhood of Elliston there is much activity in mining. On Dry Cottonwood creek, 14 miles southeast of Deer Lodge, many sapphires have been mined.

Powell County is well timbered, especially in the northern part, and lumbering is an industry of importance. A large part of the land is mountainous and where it is not covered by timber there is a luxuriant growth of native grasses. Much attention has been paid to improving the breeds of livestock and Powell County is noted for the excellence of its horses, cattle and sheep. Many carloads of beef cattle and wool are annually shipped.

The Deer Lodge valley, where irrigation is practiced, contains many productive farms. A number of large ranches in the vicinity of Deer Lodge have recently changed hands and will be sold in farms of moderate size, with the result of adding greatly to the number of farms in the valley. The valley of the Little Blackfoot is not an extensive one but contains many good farms. Nevada Creek valley is larger and in it are raised large crops of hay and grain. The Big Blackfoot valley is a fine stock country which will change in part to a farming district when railroads are built into it. The soil is fertile, all grains do well, and in few sections can such profuse yields of timothy be secured.

On some of the large ranches in the Big Blackfoot valley, farming has been successfully conducted on a large scale and on many small farms and homestead claims excellent crops have been raised. The arable area is extensive, but its agricultural development has been held back by the lack of railroads. The northern part of Powell County is now almost exclusively a

BEAT RAISING IS PROFITABLE

CORN FIELD ON BROOK'S RANCH

stock raising district, but when it is made possible to transport farm products to market by rail the fertile lands in the valleys and on the benches and foothills will be devoted to farming, and the higher and rougher lands will be used for grazing live-stock. Cultivated grasses make large yields and the native grasses are abundant and nutritious; water is plentiful; the climate is good and the soil fertile; wood for fuel is abundant. As soon as a railroad reaches this district it should attract a large population to engage in diversified farming for which the country has so many advantages.

The location of Powell County close to the cities of Butte, Anaconda, Missoula and Helena insures convenient markets for all products. Truck gardening and the raising of poultry and eggs are profitable, and the county has unusual advantages for the dairyman.

The main line of the Northern Pacific, via Helena, after crossing the main divide at Mullan Pass and tunnel, follows the course of the Little Blackfoot river and at Garrison is joined by the line extending from Logan through Butte and the Deer Lodge valley.

Deer Lodge, the county seat, was prominent in the history of Montana in territorial days. It is a city of homes, is beautifully located, has well laid out streets bordered by shade trees, has many churches, fine graded schools, is the seat of St. Mary's Academy for girls and of the College of Montana, an old, well equipped and well endowed institution of higher learning. The town has many handsome public and private buildings, banks, newspapers, and commercial establishments. Large sums have recently been spent in public improvements, including many new buildings, a new sewer system, and several miles of sidewalks. The Montana State Prison is located at Deer Lodge, and the furnishing of supplies to the inmates and the guards is a considerable item in the town's business.

Other towns are Elliston on the Little Blackfoot, a mining center; Garrison, a Northern Pacific Railway junction point and the trading place for a considerable territory; Ovando and Helmville. Helmville is the principal town in the northern part of the county and is surrounded by a good farming region which will experience rapid development when the railroad comes.

The population of Powell County is estimated at 7,722, and the assessed valuation is $7,346,760.

Land Area—Powell County, which is in the Helena land district, embraces an area of 2,549 square miles, including 218,684 acres of unreserved and unappropriated public land, available for entry under the homestead law, 52,564 acres of state land, and 621,509 acres of national forests. Of the total area of the county, 573,327 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 50,000 bushels; oats, 425,000

bushels; barley, 25,000 bushels; corn, 2,000 bushels; potatoes, 95,000 bushels; hay, 76,000 tons.

In 1915, the assessor's rolls showed the following livestock: Horses, 4,832 head; milch cows, 1,353 head; other cattle, 13,631 head; sheep, 97,214 head; swine, 1,213 head.

Prairie County

Paririe County, carved in 1915 from parts of Custer and Dawson, is Montana's baby county. It is one of the smallest counties of the state, but is likewise one of the best developed. Practically the entire area of the county is available for farming purposes and as all of the county is within easy access of the best of railroad transportation, it will undoubtedly be but a short time until every tillable acre in the county is placed under the plow.

Prairie County is watered by the Yellowstone river, which flows through the county from west to east, and by a number of smaller streams which flow into the Yellowstone. Irrigation, however, is not practiced in this county, as exceptionally high yields have been secured by non-irrigated farming. This county, like Dawson and Custer, is in the heart of the "corn belt" of Montana, and its long growing season enables corn to attain certain maturity.

The climate is practically the same as that of Iowa and Illinois. The altitude is approximately 2,300 feet, insuring cool nights; there are comparatively few severe storms; the air is dry and one does not feel the cold of winter or the heat of summer as in more humid regions. The normal rainfall is in excess of fifteen inches, more than half of which falls during the growing season and, under proper cultivation, this has proved ample for all crops in this soil.

Terry, the county seat, is a rapidly growing town with excellent railroad facilities. It is served by the main line of the Northern Pacific Railway. Terry is a distributing center for a large farming country in the northern part of the county and is rapidly assuming metropolitan airs. The second most important town in the county is Fallen, near the extreme eastern border. Like Terry, Fallen enjoys a good trade and is growing rapidly.

The population of Prairie County is estimated at 6,107, and the assessed valuation of the county, in 1915, was $5,088,483.

Land Area—Prairie County, which is in the Miles City land district, embraces an area of 1,685 square miles, including 109,280 acres of unreserved and unappropriated public land available for entry under the homestead law, and 58,698 acres of state land. Of the total area of the county, 634,568 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 450,000 bushels; oats, 575,000 bushels; barley, 45,000 bushels; corn, 65,000 bushels; flax, 70,000 bushels; potatoes, 80,000 bushels; hay, 12,500 tons.

In 1915, the assessor's rolls showed the following livestock: Horses, 7,626 head; milch cows, 1,552 head; other cattle, 7,242 head; sheep, 55,184 head; swine, 1,779 head.

Ravalli County

Between the high Bitter Root mountain range, which forms the western boundary of Montana, and an outlying range of the Rocky Mountains, lies the Bitter Root Valley, noted as one of the most wonderful sections of America on account of the salubrity of the climate, the fertility of the soil and the beauty of the scenery. All but about fifteen miles of this valley, which is about 75 miles long and varies in width from a mile or two to fifteen miles or more, is in Ravalli County. On both sides are extensive foothills and benches. From the mountains descend many streams that furnish water for irrigation, and through the length of the valley flows the beautiful Bitter Root river, one of the headwater streams of the Columbia river. Protected by mountain ranges the winters are usually mild, the thermometer rarely falling to zero. The summers are delightful, the days are never excessively hot and the nights are always cool. There are many places of rare scenic beauty, mineral springs, excellent trout streams, and places where big game may be found. The first church in Montana was established by Father DeSmet in the Bitter Root valley in 1841, and there the first crops of wheat, oats and potatoes were grown. The first flour and saw mills to be built in what is now the state of Montana were built then under the direction of the Catholic missionaries to the Flathead Indians. This tribe then inhabited the country. Ravalli County was formed from Missoula County in 1893 and named for Father Ravalli, one of the pioneer priests.

The industries are farming, fruit growing and lumbering. Agriculture in Montana had its beginning in the Bitter Root valley, which early attracted settlers who engaged in stock raising and in farming. Hay, wheat and oats made astonishing yields. Marcus Daly, the copper magnate, bought a large tract of land near Hamilton and made it the most highly improved farm in Montana. Good crops have been grown without irrigation on bench lands. The valley lands are irrigated and large yields of all staple crops are harvested every year. A new and promising crop is seed peas. The potato rivals the apple as a profit producing crop.

Celery, asparagus, tomatoes, peas, cabbage and other vegetables are raised in large quantities and sold in the cities of the state.

Ravalli is not a range stock county, but has many pure bred horses, cattle and hogs. The Bitter Root Stock Farm at Hamilton was formerly the home of Mr. Daly's stable of famous thoroughbred and standard bred horses and many noted performers on race tracks were raised there. The dairy stock is of high grade and the valley has many advantages as a dairying section.

Some of the early settlers planted fruit trees which succeeded so well that it became evident that the Bitter Root valley possessed unique advantages as a fruit district, and much credit is due to the early fruit growers whose experiments resulted in building up a great industry. Orchards are found in all parts of the valley and on bench lands that are not suitable for farming. The profits from growing apples are so great that no one can afford to grow grain on lands suitable for orchards. Large capital has been enlisted in developing irrigation and orchard enterprises, and much publicity has been given to the attractions and advantages of this section. One of the longest

TRANSFORMING MONTANA PRAIRIE INTO A PRODUCTIVE FARM BY MODERN METHODS

private irrigation canals in the world has been constructed by the Bitter Root Irrigation Company.

Apples are the chief commercial fruit crop, the variety most extensively grown being the McIntosh Red, which reaches perfection in this valley. Hundreds of thousands of trees have been set out in the last few years. Cherries, pears, plums, peaches and berries are also very successful. Fruit tracts are usually irrigated, and water has been brought at great expense from distant reservoirs to insure an unfailing supply. For quality and product and profit yielded the orchards of the Bitter Root valley challenge comparison with those in the most famous fruit district.

The mountains are heavily timbered and lumbering is an important industry. At Hamilton is one of the largest saw mills in the state and there are smaller ones at other places. Ravalli County has also mineral wealth—gold, silver, copper and coal.

Flourishing small towns are close together, the chief ones being Stevensville, Victor, Corvallis, Darby, and Hamilton the county seat and principal town. Hamilton has city water works, sewer, electric lights, a fine city hall and county court house, three saw mills, one flour and oat meal mill, an elevator, an evaporator, a creamery, manufactories and desires a beet sugar factory. It has one of the finest hotel buildings in the state, banks, large business establishments, good schools, many churches, two newspapers and is the chief trading point of a rich and growing country.

Stevensville, the next town in population and business importance, has city water works and electric lights, excellent schools, a hospital, six churches, banks, a public library, a newspaper, a creamery and a number of retail stores.

Victor and Corvallis are flourishing towns in the valley surrounded by good fruit and farming districts. Darby, the terminus of the railroad sixteen miles south of Hamilton, is surrounded by a rapidly developing country.

All parts of the county present excellent opportunities for the homeseeker to purchase improved or unimproved farms, orchards or fruit lands at low prices, below their value considered from an investment standpoint, and in many cases on very easy terms.

The estimated population of Ravalli County is 13,256, and the assessed valuation is $7,492,264.

Land Area—Ravalli County, which is in the Missoula land district, embraces an area of 2,391 square miles, including 6,560 acres of unreserved and unappropriated public land available for entry under the homestead law, 28,778 acres of state land, and 1,131,346 acres of national forests. Of the total area of the county, 388,755 acres are privately owned.

Crop Production—The following gives the estimated crop

production for 1915: Wheat, 250,000 bushels; oats, 1,250,000 bushels; barley, 75,000 bushels; corn, 8,500 bushels; potatoes, 425,000 bushels; hay, 50,000 tons; apples, 150,000 bushels; strawberries, 100,000 quarts, raspberries, 27,000 quarts; currants, 17,000 quarts.

In 1915, the assessor's rolls showed the following livestock: Horses, 6,679 head; milch cows, 3,811 head; other cattle, 10,986 head; sheep, 12,072 head; swine, 4,437 head.

Richland County

No county in Montana has enjoyed greater growth in the past few years than has Richland, which was carved out of the northwestern corner of Dawson County in 1914. The territory now embraced in Richland County was formerly regarded as the premier stock range of the great cattle country, but it is today one of the most progressive farming sections of the state.

Both irrigated and non-irrigated farming is practiced in Richland County. In the eastern section of the county lies the Lower Yellowstone project of the United States Reclamation Service, one of the largest irrigation projects in the west; in the western and northern sections, non-irrigated farming is followed on a large scale and with exceptionally satisfactory results.

Sidney, the county seat, reached by a branch line of the Northern Pacific Railway, is a remarkably well built city of about 1,500 population and growing very rapidly. It has all modern improvements, including a water system, electric lights, well graded streets and miles of concrete sidewalks. Its business blocks are of the most modern, fire proof construction, which would not be out of place in a town many times the size.

Fairview, the second town of importance in the county, is along the state line between Montana and North Dakota and is growing rapidly. It has a population of about 900, and is a well built, progressive little city. Fairview is in the center of the Lower Yellowstone project and has every chance of becoming one of the finest farming towns in the state. Lambert, in the western part of the county, has enjoyed a large trade with the country to the north and west. This road is now being extended westward a distance of twenty-five miles and will, it is believed, be put through to Lewistown within the next few years.

An exceptionally large number of new settlers has gone into Richland County within the past three years and what homestead land remains is some distance from the railroads. Large private holdings, however, including much Northern Pacific land, has recently been put on the market and many buyers are coming into this section of the state. Improved irrigated land sells for between $40 and $50 an acre, and unimproved irrigated land at from $25 to $30. Non-irrigated bench land ranges in price from $30 for improved to $10 for unimproved.

The estimated population of Richland County is 16,500, and the assessed valuation, in 1915, was $5,554,436.

Land Area—Richland County, which is in the Lewistown and Miles City land districts, embraces an area of 2,703 square miles, including 306,085 acres of unreserved and unappropriated public land available for entry under the homestead law, and 86,888 acres of state land. Of the total area of the county, 728,018 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 1,500,000 bushels; oats, 1,350,000 bushels; barley, 65,000 bushels; corn, 125,000 bushels; flax, 100,000 bushels; potatoes, 97,000 bushels; hay, 26,000 tons.

In 1915, the assessor's rolls showed the following livestock: Horses, 15,992 head; milch cows, 2,992 head; other cattle, 9,404 head; sheep, 3,154 head; swine, 3,695 head.

Rosebud County

Rosebud County was created in 1901 from a part of Custer County; and in January, 1913, a large area in the western and southern parts was taken by the new county of Big Horn. Rosebud is one of the counties in the Yellowstone valley. It has been developing very rapidly in recent years but is still sparsely settled and offers excellent opportunities to homeseekers. Stock growing was almost the only industry when the county was organized and is still a very important one. Large quantities of wool and large numbers of beef cattle are annually shipped.

The county has a great extent of arable lands and the farming industry is rapidly growing in importance. Farm lands are of two kinds, irrigated lands, which are situated in the valleys, and non-irrigated lands, which are situated on the benches and in the foothills. The chief irrigated districts are in the Yellowstone and Rosebud valleys, where are produced great yields of alfalfa, sugar beets, wheat, oats, barley, corn and vegetables. In no county in Montana does corn do better, and stalks and ears of surprising size have been exhibited at state fairs. The productiveness of the soil is strikingly shown by the great yield of vegetables and by the size of specimens. Yields on irrigated lands are about as follows: Wheat, 50 to 60 bushels; oats, 70 to 90 bushels; sugar beets, 18 to 22 tons; alfalfa hay—three cuttings, 2 to 6 tons an acre. As evidence of what may be accomplished in Rosebud County, Mr. Will Cooley, a well known rachman of Sarpy Basin, disposed of two wagon loads of alfalfa seed in Hysham for eastern shipment for which he received the snug sum of $1,800.00.

A large part of the Crow Indian reservation was in Rosebud County previous to the creation of Big Horn County, in which it is now included, together with a part of the Northern Cheyenne reservation. The agency and the greater part of the latter reservation remain in Rosebud County.

The Northern Pacific Railway follows the south bank of the Yellowstone river from the eastern to the western boundary of the county.

The principal town is Forsyth, the county seat, which is located on the Northern Pacific Railway, and in population and business it is the most important town in the large extent of country between Billings and Miles City. Forsyth is a progressive place, has good schools several churches, a public reading room and gymnasium, municipally owned water works, a sweer system, cement sidewalks, electric lights, telephones, a newspaper, banks, hotels, business houses and attractive residences. Forsyth is the trading point for an extensive and developing agricultural section,

A HAYING SCENE IN GALLATIN VALLEY

and also the shipping point for large quantities of wool and livestock.

Other towns on the Northern Pacific Railway are Rosebud, which is a thriving town and trading point for a large territory on both sides of the Yellowstone river and for the country drained by the Rosebud river, and Hysham in the western part of the county, which is surrounded by a very productive country and is a progressive and growing town.

The estimated population of Rosebud County is 15,675 and the assessed valuation is $12,883,047.

Land Area—Rosebud County, which is in the Lewistown and Miles City districts, embraces an area of 6,067 square miles, including 947,908 acres of unreserved and unappropriated public land available for entry under the homestead law, 193,419 acres of state land and 100,607 acres of national forests. Of the total area of the county, 1,838,617 acres are privately owned

Crop Production—The following gives the estimated crop production for 1915: Wheat, 350,000 bushels; oats, 525,000 bushels; barley, 42,000 bushels; corn, 165,000 bushels; flax, 20,000 bushels; potatoes, 140,000 bushels; hay, 40,000 tons.

In 1915, the assessor's rolls showed the following livestock: Horses, 13,560 head; milch cows, 1,309 head; other cattle, 29,770 head; sheep, 109,945 head; swine, 3,138 head.

Sanders County

Sanders County embraces the country lying north of Missoula and south of Lincoln and Flathead Counties adjacent to Idaho. It was created in 1906 from a part of Missoula County and named for Wilbur F. Sanders, who was a distinguished pioneer and one of Montana's first United States Senators.

The industries are farming, fruit growing, stock raising, lumbering and mining. The chief agricultural districts are in the Clark Fork valley near the towns of Plains, Paradise and Thompson Falls. Back from the valley on the benches on both sides are farms and fruit tracts. In the Little Bitter Root and Flathead valleys and on Camas Prairie, in the recently ceded Flathead reservation, great agricultural development has taken place and this fertile section will produce great quantities of grain when a railroad is built into it.

Sanders County has a fertile soil, and any crop that grows anywhere in the state, here produce large yields. The rainfall, about 18 inches annually, most of which comes during the growing season, as a rule provides sufficient moisture for crops, although Clark Fork river and its tributaries provide an abundant water supply for irrigating purposes. The area now under irrigation is being increased, and excellent opportunities exist for capitalists to undertake large irrigation projects. To its fertile soil Sanders County adds the advantages of a mild climate and a

low altitude, the elevation at Heron being only 2,267 feet. The mountains surrounding the valley afford protection and because the springs come earlier and the summers last longer than in other parts of the state, varieties of fruits and vegetables thrive that do not succeed where conditions are different.

The soil in the bottom lands is usually a fine, deep, sandy loam, while on the bench lands a rich gravelly loam is found. Frequent yields are from 2 to 4 tons of timothy an acre, 4 to 5 tons of red clover and 3 to 6 of alfalfa; 40 to 50 bushels of wheat, 60 to 100 bushels of oats, 60 to 70 bushels of barley, 400 bushels of potatoes, and vegetables and fruits in proportion. No finer strawberries are grown anywhere and they find a ready sale in the mining camps. The agricultural products are sold in all the large cities of the state, but the principal market is in the mining camps of the Coeur d'Alene country, lying immediately south, with which there is a direct railroad connection by way of the Coeur d'Alene branch of the Northern Pacific.

Wheat, oats, barley, flax and hay are the principal crops and the yields are large.

The fruit growing possibilities of numerous districts in this county are almost limitless. Apples, peaches, pears, cherries and berries thrive in one or more of them, and some of the best orchards in Montana are in the Plains valley.

The conditions of fruit growing are substantially similar to those in the Bitter Root and Missoula valleys; the Northern Spy, the Baldwin, the Spitzenberg apple grow to perfection and no finer specimens of the famous McIntosh Red can be found anywhere than are produced in this county. All other kinds of fruit grow in profusion in all the valleys of the county, and each succeeding year sees new orchards started. Sanders County promises to become one of the chief fruit producing counties of the Northwest.

The county is well adapted to dairying and poultry raising, both of which bring large and certain returns.

The mountains, which cover about three-fifths of the area of of the county, are covered with billions of feet of pine, fir, spruce, tamarack and cedar, and lumbering has been a leading industry since the Northern Pacific Railway was built through it in 1883. There are many saw mills and the lumber companies pay out large sums for wages. Much of the timbered land, when cleared, will make the finest kind of farming land.

Sanders County adjoins the famous Coeur d'Alene mineral district and has a similar geological formation. Around Trout Creek and White Pine sufficient work has been done to show the existence of rich deposits of lead, silver and copper, and throughout the mountain districts are mineral claims that promise to develop into mines. The mineral districts of Sanders County need capital for their development and promise splendid returns for investments in mining properties.

The Camas Hot Springs on the Flathead reservation, which have been reserved by the Government on account of their wonderful curative qualities as a resort for invalids, may become a rival to the Hot Springs of Arkansas. Near Paradise is Quinn's Hot Springs, a favorite place of resort that has good accommodations.

Large sums have been spent in the last three years in improving highways and in constructing at Plains and Thompson Falls very long and expensive bridges across Clark Fork river which afford communication to farming and fruit districts near those towns.

A valuable asset is the great water power of Clark Fork river and of tributary streams. By constructing a 25-foot dam at Thompson Falls it was possible to generate 60,000 horse power.

Plains, in the productive Plains valley and the trading point for the western part of the old Flathead reservation, is the chief town. It has a water works system, electric lights, an elevator, a public school building which cost $25,000, four churches, banks, newspaper, numerous business houses which have spent much money on permanent improvements, and many new buildings have been recently erected.

Thompson Falls, the county seat and a growing town in a rich undeveloped district, has two public schools and a high school building, a hospital, a church, a newspaper, a bank, hotels, stores and a fine system of water works. There is much good agricultural land in the vicinity of Thompson Falls, and this, with the unlimited water power and the extensive timber lands, is bound to develop a sturdy and prosperous young city in the near future.

Paradise is the railroad point where are a large railroad roundhouse and a tie preserving plant. A large monthly wage is paid to the numerous railway employes.

Camas is a new town on the old reservation, that has grown up around the Camas springs and promises to become an important place. The springs attract visitors to the town which is a trading point for a country that has recently been settled. It has hotels, business houses, a bank and a newspaper.

Dixon, a growing town situated on the Northern Pacific Railway where the Flathead river joins the Clark Fork, is the trading point for a good farming country, is connected by auto stages with towns north of it, and is the port of a steamboat that runs on Flathead river. The town has mercantile establishments, a bank, a newspaper and hotels. The Northern Pacific is constructing a branch line from Dixon across the former Flathead reservation to Ronan and Polson, the latter at the southern point of Flathead lake. It will be completed early in 1917.

The estimated population of Sanders County is 6,500, and the assessed valuation is $6,044,324.

Land Area—Sanders County, which is in the Missoula land district, embraces an area of 2,837 square miles, including 115,087 acres of unreserved and unappropriated public land available for entry under the homestead law, 58,897 acres of state land, and 1,005,438 acres of national forests. Of the total area of the county, 447,662 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 200,000 bushels; oats, 525,000 bushels; barley, 17,500 bushels; corn, 10,000 bushels; potatoes, 85,000 bushels; hay, 7,500 tons.

In 1915, the assessor's rolls showed the following livestock: Horses, 3,002 head; milch cows, 1,500 head; other cattle, 3,896 head; sheep, 2,150 head; swine, 654 head.

Silver Bow County

Silver Bow, the smallest County in the state, having an area of but 698 miles, is by far the richest and most populous. Its prosperity is derived largely from the marvelous richness of its copper and zinc mines, and, while the mining industry has over-

THRESHING TIME, GALLATIN VALLEY

shadowed all others, Butte, the metropolis of the state, has developed into a large distributing center. Butte is practically Silver Bow County, although the incorporated area of the municipality itself embraces but a comparatively small portion of the territory actually covered by the city. The area devoted to agriculture in Silver Bow County is very small, and no great increase is likely.

Butte is known as the "greatest mining camp on earth" but it is much more than that. It is the largest city of the state, the population, at the present time, being estimated at 65,000 or more, and, aside from its mining interests, it is of importance because of its manufacturers and as a financial, railroad, commercial and distributing center. With one exception, every interstate railroad operating in Montana has lines into Butte.

Butte, from a one time mining camp, and later a city of smoke, has emerged into a city of beautiful homes, splendidly paved streets, fine public buildings, dignified business blocks, and is generally accorded the distinction of being one of the most metropolitan cities of its size on the continent. Few cities can boast of a more healthful or bracing climate. Seldom is the winter excessively cold, and when, occasionally, there is a touch of zero weather in mid-winter, there is an absence of chill and penetration, due to the peculiar dryness of the air.

Copper and zinc form the basis of Butte's exceptional prosperity, the annual production of the former being in excess of 300,000,000 pounds and the latter about 215,000,000. More than 15,000 miners are employed underground at the highest wages paid for this kind of work anywhere in the world. The total mining payroll of the Butte district, in the spring of 1916, was more than $2,500,000 monthly. Butte produces one-fourth of the copper mined in America, and one-seventh of the world's production. In addition to the copper and zinc mined, there is annually produced, chiefly as a by-product, 12,000,000 ounces of silver and about $1,500,000 in gold. The Anaconda, the greatest silver producer in America, is in Butte, while the Butte and Superior is the greatest zinc producer on the continent. The Anaconda is likewise the second greatest copper producing mine in the world.

The production of zinc in the Butte district is of recent growth. In 1908, the total value of the zinc mined in the district was estimated at $77,080. It reached $1,708,000 in 1910, went to $6,200,000 in 1914, and to more than $20,000,000 in 1915. In 1916, figured on the prevailing price of spelter and the rate of production in the early spring, it is believed that the total value of the zinc production in Butte will reach $43,000,000.

The operation of the mines in Butte furnishes ready markets for many products of the Treasure State. Electrical power is sent to Butte over long-distance transmission lines from Great Falls, Helena and the Madison river. More than 65,000,000

feet of timber is annually used in making safe the underground workings.

The permanence of the Butte mining district is assured. Gold and silver camps are usually short-lived, but copper veins increase in value as depth is attained. Copper mines in Europe have been worked for more than a thousand years, and on this basis, although Butte has been a copper producer for 34 years, and during that time has sent to the markets of the world a billion dollars worth of the red metal, the camp is but in its infancy. The depth of the producing Butte mines range from 1,000 to 3,500 feet.

Butte is noted for its modern and excellent educational system. There are 27 public schools, with one of the largest and most efficient corps of teachers in the Northwest. There are also seven parochial schools and a most up-to-date high school which offers technical training in several lines. The State School of Mines, a branch of the University of Montana, is located here, and annually turns out a class of mining engineers whose theoretical education has been supplemented by intimate acquaintance and observation of the practical sides of mining and smelting.

There are 42 churches in Butte, Prostestant and Catholic. Almost every religious denomination is represented, including Catholic, Adventist, Baptist, Christian, Episcopalian, Greek, Hebrew, Latter Day Saints, Lutheran, Methodist, Presbyterian, Reorganized, Christian Scientist and Unitarian, besides several missions.

Railroad men term Butte the "cross-roads of the Northwest." Five transcontinental lines run into the state's metropolis, and the railroad business of this city is declared to be the largest of any inland city of its population in the world.

The population of Silver Bow County is estimated at 100,000, and the assessed valuation, in 1915, was $42,419,268.

Land Area—Silver Bow County, which is in the Helena land district, embraces an area of 698 square miles, including 59,924 acres of unreserved and unappropriated public land, little of which is, however, suitable for cultivation; 14,994 acres of state land, and 188,144 acres of national forests. Of the total area of the county, 90,600 acres are privately owned

Crop Production—The following gives the estimated crop production for 1915: Wheat, 10,000 bushels; oats, 25,000 bushels; barley, 2,500 bushels; potatoes, 12,500 bushels; hay, 10,000 tons.

In 1915, the assessor's rolls showed the following livestock: Horses, 2,539 head; milch cows, 1,696 head; other cattle, 2,348 head; sheep, 8,115 head; swine, 587 head.

Stillwater County

Stillwater County is another of the newer political subdivisions of the state, and since the creation of the county, in 1913, from parts of Yellowstone, Sweetgrass and Carbon Counties, it has enjoyed an exceptionally rapid growth.

Stillwater County lies in the center of the great dry land farming region of eastern Montana and the inhabitants of the county devote themselves exclusively to farming and stock raising. The southern part of the county is well watered by the Stillwater river, which flows north into the Yellowstone at Columbus. Along the Stillwater river is one of the oldest farming regions of the state, and about Absarokee are to be found many irrigated farms on which intensive farming and fruit raising is practiced.

The northern part of the county embraces a portion of what is known as the Lake Basin country, one of the best developed and most productive dry land farming sections of the state. It comprises a territory 40 by 60 miles and has a rich soil, heavily mixed with limestone and potash. The production of grain crops during the past six years has been phenomenal, on account of the great fertility of the soil. This territory is well watered by small streams and springs, and is therefore well adapted to farming, as well as stock raising and dairying. In the near future this district will be traversed by the proposed extension from Billings in a northwesterly direction, bringing all this good land in close proximity to transportation. There is any amount of good undeveloped land to be had at reasonable prices, and as the agricultural resources are so great in this Lake Basin territory, a competence is assured to the settler who invests here. The district is well adapted to colonization purposes, on account of the large amount of vacant land still available.

Columbus, the county seat, is said to be the best lighted town of its size in the state, and is a thoroughly modern little city. It has doubled in population since the 1910 census was taken and is now estimated as having a population of 1,000. It has bank deposits of more than $500,000, and has ten retail stores, two newspapers, two elevators, and two lumber yards. Nearby is quarried the famous Columbus sandstone which was used in the erection of the State Capitol at Helena. An effort is now being made to secure a flour mill and a cheese factory, while at least 15,000 horse power is awaiting development.

One of the most rapidly growing towns in the county is Reed Point. There is fine bench land to be obtained both north and south of the town. Mr. John M. Hiner, of Reed Point, won the Studebaker automobile offered for the best wheat at the Montana State Fair at Helena, in 1915, against over a hundred entries from all parts of the state. His wheat was Turkey Red, and grown on non-irrigated land.

An effort is being made to secure the construction of an electric or steam road up the Stillwater valley. Such a road would not only furnish much needed transportation for an agricultural population of 4,000 but would also tap extensive timber lands and coal and mineral deposits. The Rosebud lakes, easily reached from Columbus, offer fine scenic attractions and the East Rosebud Lake colony is one of the popular summer places of the state.

Although there is but little good homestead land left in Stillwater County, land can be purchased at prices which are very attractive. Improved farm land sells at about $30 an acre, while unimproved land may be had for $20 or even less.

The estimated population of Stillwater County is 4,637, and the assessed valuation of the county, in 1915, was $6,028,429.

Land Area—Stillwater County, which is in the Bozeman and Billings land districts, embraces an area of 1,684 square miles, including 47,914 acres of unreserved and unappropriated public land available for entry under the homestead law, 50,539 acres of state land and 99,200 acres of national forests. Of the total area of the county, 522,280 acres are privately owned.

A RANCH HOME IN THE JEFFERSON VALLEY

Crop Production—The following gives the estimated crop production for 1915: Wheat, 450,000 bushels; oats, 350,000 bushels; barley, 60,000 bushels; corn, 40,000 bushels; flax, 50,000 bushels; potatoes, 125,000 bushels; hay, 75,000 tons.

In 1915, the assessor's rolls showed the following livestock: Horses, 5,844 head; milch cows, 1,739 head; other cattle, 9,514 head; sheep, 58,754 head; swine, 3,095 head.

Sweetgrass County

Sweetgrass County, which was organized in 1895, is situated in the southern part of the state. The Yellowstone river runs from west to east nearly through its center. On the south the land rises from the level of the river to a high range of mountains in which head the Boulder and Stillwater rivers; and on the north the land rises to the Crazy mountains. Big Timber and Sweet Grass creeks are large streams that enter the Yellowstone river from the north. The northern part of the county is drained by tributaries of the Musselshell river.

In the southern part, much of which is in a forest reserve, are tracts of merchantable timber and a highly mineralized district containing ores of gold, silver, lead and copper. Coal has also been found. This region is one of remarkable scenic beauty. Many visitors come each year to fish in the Boulder river, a beautiful mountain stream in which trout abound. One of the most wonderful natural objects in the state is the Natural Bridge over the Boulder river. On several streams are cascades of rare beauty.

The county is well watered and there are many valleys. The Yellowstone valley, about 55 miles long by 2 wide, the valleys of the Boulder, Big Timber, Sweet Grass, American Fork and Otter Creek, of varying length and width, are the chief agricultural districts. Private irrigation canals have brought water to the lands in the valleys, where hay is the chief crop and is raised in connection with stock raising. The county is noted for the excellence of the native grasses and stock growing is an important and profitable industry. Sheep are owned in large numbers and great quantities of wool are shipped from Big Timber.

Farming is of irrigated and unirrigated land, the latter a recent development. Many acres are under private irrigation, and a great impulse has been given to the agricultural development of the county by the completion of the Big Timber Carey Act project. Many new settlers on these lands have raised excellent crops and more land is being cultivated each year, and a large and prosperous community of farmers and fruit growers will occupy many acres that a few years ago were used only for grazing. Oats, 162 bushels to the acre; barley, showing a cash return of $48 an acre; wheat, from 20 to 40 bushels; flax, running to 25 bushels an acre; and potatoes remarkable for size and quality are

reported as having been raised on lands in this project. Alfalfa is the chief crop on irrigated lands and yields about four tons an acre.

Farming without irrigation is succeeding because the soil is fertile and the rainfall averages about 20 inches annually. Many settlers have come into the northern and eastern parts of the county and are transforming what used to be a noted range country into a region of productive farms.

Many orchards have been set out and the county promises to become a large producer of fruit. The soil and climate are well adapted for the growth of sugar beets.

Hog raising is attracting attention and the conditions are favorable for its development into a very profitable branch of farming. The excellence of the grasses, water and climate suggest that dairying ought to become one of the leading industries.

Small towns that are trading points for the surrounding country are Melville in the northern and McLeod in the southern part of the county. Big Timber, the county seat, is the chief town. It is an attractive and growing place and has an elevator, a creamery, a newspaper, hotels, stores, schools, churches, a hospital, a city hall, miles of cement sidewalks, electric lights, a water works system, an attractive court house, and is the trading and shipping point for a rich agricultural and stock country. Of 26,000 horse power available only a small portion is developed.

The estimated population of Sweetgrass County is 4,637, and the assessed valuation is $5,379,976.

Land Area—Sweetgrass County, which is in the Bozeman land district, embraces an area of 2,310 square miles, including 169,628 acres of unreserved and unappropriated public land available for entry under the homestead law, 76,612 acres of state land, and 413,809 acres of national forests. Of the total area of the county, 655,116 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 85,000 bushels; corn, 12,000 bushels; flax, 20,000 bushels; oats, 325,000 bushels; barley, 40,000 bushels; potatoes, 79,000 bushels; hay, 72,000 tons.

In 1915, the assessor's rolls showed the following livestock: Horses, 5,127 head; milch cows, 1,851 head; other cattle, 16,535 head; sheep, 140,159 head; swine, 2,843 head.

Wibaux County

Although Wibaux County is the third smallest county in the state, it probably has a greater percentage of its total area under cultivation than any other county in the state. It is the "gateway" county to Montana, the county through which all Northern Pacific Railway passengers, from the east, enter Montana.

Beaver creek extends northward through the county, forming a large fertile valley which is highly productive. There is but little land in the county which is not tillable and during the past two years the amount of land in crops in this county has more than doubled.

Wibaux, the county seat and principal town, is a thriving city of 700 people and is growing rapidly. It has two banks, fifteen retail stores, two weekly newspapers, a creamery, three garages, two livery stables, two hotels and five elevators, the latter with a combined capacity of about 250,000 bushels. City water works and an electric lighting plant, together with good streets and fine sidewalks, give the town a metropolitan appearance. It is expected that a flour mill will be established here during the coming year.

But little public land remains in Wibaux County which is suitable for farming, although private land can be purchased at low prices and offer an unusual opportunity for the industrious farmer. Improved farm land sells for $25 an acre and unimproved land can be purchased from $15 to $18 an acre.

The estimated population of Wibaux County is 5,336, and the assessed valuation of the county, in 1915, was $3,823,421.

Land Area—Wibaux County, which is in the Miles City land district, embraces an area of 944 square miles, including 34,400 acres of unreserved and unappropriated public land available for entry under the homestead law, 31,358 acres of state land. Of the total area of the county, 422,834 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 525,000 bushels; oats, 675,000 bushels; barley, 54,000 bushels; corn, 65,000 bushels; flax, 75,000 bushels; potatoes, 76,000 bushels; hay, 15,000 tons.

In 1915, the assessor's rolls showed the following livestock: Horses, 5,356 head; milch cows, 1,139 head; other cattle, 4,715 head; sheep, 1,477 head; swine, 1,123 head.

Yellowstone County

Yellowstone, the most important and populous of the counties in the Yellowstone valley, was created February 26, 1883, and named for the Yellowstone river which crosses it from the western to the eastern boundary. The Big Horn river forms a part of the eastern boundary, and mountain ranges in the south, west, and north afford protection and modify the climate. During the past five years, the average temperature for December, January and February has been 29 degrees above zero. Spring opens early; and plowing and planting is commonly done before the rainy season, April, May and June, in which months half of the annual rainfall of over 15 inches falls. The long days of sunshine are ideal for the growing and maturing and harvesting of crops.

The rural industries are stock raising and farming. Yellowstone County has long been noted for the number and excellence of its livestock, and great quantities of wool and numerous cars of cattle and sheep are annually shipped. In addition to the mere raising of livestock, another phase of this industry has assumed large importance, viz., the feeding and fattening of cattle and sheep for the market. Hog raising is also being very profitably pursued. The conditions are ideal for dairying.

Farming is of both irrigated and non-irrigated lands. The Yellowstone valley is extensive and about 268,000 acres are under irrigation in the county. Irrigated lands may be purchased at from $35 to $50 an acre on the newer projects, and $75 to $150 under the older canals.

ONIONS GROW ABUNDANTLY IN MONTANA SOIL

Average yields of land in the irrigated districts are uniformly high. Alfalfa and sugar beets are the great crops in the valley, the yield of the former being 3 to 6 tons to an acre and on the latter from 10 to 20 tons. Oats yield from 50 to 90 bushels an acre, wheat from 40 to 60 bushels, and corn from 30 to 50 bushels. Barley of the finest malting variety is grown. Potatoes yield from 200 to 400 bushels to the acre, and the largest known yield from one acre, 1,213 bushels, was made near Laurel in this county. Vegetables of verious kinds do well and are grown successfully for shipment to distant points. Berries are very profitable; apples do splendidly and many orchards have been set out. Fruit growing is an increasing industry and the products of the orchards sell for a large sum annually.

The Yellowstone valley is the chief sugar beet growing district of the state. Sugar beets yield enormously and have a high percentage of saccharine strength. At Billings is located the only beet sugar factory in the state.

Away from the valleys and the irrigated districts farming is carried on without irrigation and is called upland, or dry land farming.

In the northwestern part of the county is the Lake Basin country, a very extensive region in which many new settlers are growing successful crops by dry farming methods. The Broadview district, in another important dry farming section, has made displays at the state fair which have attracted much attention.

The Northern Pacific Railway's main line follows the Yellowstone river across the county and branch lines extend from Billings via Laurel to Red Lodge and Bridger in Carbon County. Communication with Omaha, Denver, and local points on the Crow reservation and in northern Wyoming is afforded by the Burlington system.

The chief towns are Billings and Laurel. Others are Huntley, Ballatine and Hardin on the Huntly project; Broadview and Comanche.

Laurel is an example of the rapidity with which towns grow in Montana. A few years ago the population was about 200 and today it is about 1,500. It is surrounded by a fertile and extensive district of irrigated lands and its trade extends back to the bench lands that are being converted into farms. It is located opposite the mouth of Clark Fork river, which valley is one of the most productive in Montana. Laurel is a very important railway point on the main line of the Northern Pacific Railway. The Northern Pacific has very extensive yards, railroad shops and roundhouses at Laurel, and the railway monthly payroll is a large one.

Billings, the county seat, is the center of an irrigated area of approximately 500,000 acres, and of a non-irrigated farming country of 1,000,000 acres, ships great quantities of livestock,

wool, hides and grain, is the headquarters of hundreds of traveling salesmen and of numerous branch houses of large firms, has many jobbing houses, numerous churches, good public schools, a polytechnic institute representing an investment of $200,000, costly society buildings, two daily newspapers, and all the conveniences and improvements of an up-to-date city. Billings has numerous manufacturing establishments, the most important being the beet sugar factory which pays out annually about $1,500,000 in payment for beets. Hydro-electric power is abundant and 50,000 horse power is available. The population was 3,221 in 1900 and 10,031 in 1910, an increase of 211 per cent.

The population of Yellowstone County is now estimated at 28,690, and the assessed valuation is $20,531,859.

Land Area—Yellowstone County, which is in the Billings land district, embraces an area of 2,708 square miles, including 90,665 acres of unreserved and unappropriated public land available for entry under the homestead law, and 67,454 acres of state land. Of the total area of the county, 767,535 acres are privately owned.

Crop Production—The following gives the estimated crop production for 1915: Wheat, 1,050,000 bushels; oats, 950,000 bushels; barley, 56,000 bushels; corn, 75,000 bushels; flax, 25,000 bushels; potatoes, 240,000 bushels; hay, 74,000 tons; apples, 20,000 bushels; strawberries, 28,000 quarts; currants, 17,557 quarts.

In 1915, the assessor's rolls showed the following livestock: Horses, 9,613 head; milch cows, 4,004 head; other cattle, 15,071 head; sheep, 88,708 head; swine, 6,384 head.

A MONTANA "GREAT BIG BAKED" POTATO FIELD

Letters from Individuals Containing Information and Recounting Personal Experiences in Montana

The following letters being the actual experiences of individuals and containing information of inherent value, are well worth a careful reading by those contemplating establishing new homes in the West.

Twin Bridges, Montana,
March 22, 1916.

To write of Madison County is to write of a portion of Montana that is God's given own, abounding in agricultural, livestock and mineral wealth.

In the vicinity of Twin Bridges, the largest and most progressive town in Madison County, there are ranches that range in extent from 160 to 2,000 acres. On these farms and ranches are grown some of the finest crops of alfalfa hay in the state. On these same ranches are produced potatoes that furnish much of the supply for the famed "Big Baked Potato" of the Northern Pacific Railway dining car service, and grains and grasses are raised here that stand well up among the prize winners at the Montana State Fair. From this vicinity came the display of grasses last year that carried off the big prize for variety and grade at the state fair. In this same section of Madison County are raised some of the finest herds of cattle and sheep in the state. On several of the ranches within a few miles of Twin Bridges blooded herds of cattle and sheep and bands of blooded horses have been started. The owners have gone to eastern fields for the foundation stock and already some of the herds and bands have assumed rather large proportions.

Within the past year the bench lands around the town of Twin Bridges have been farmed and the old idea of no crop without water in the state of Montana has been proved to be based on no material fact. Some of the largest acreage yields of grain have been obtained from these dry land farms, and settlers are beginning to look seriously upon these bench land farms as paying propositions rather than guaranties of starvation. Wheat, especially, has proved to be better than its weight in gold when produced on these dry land farms, and a ride of but a few minutes from the town of Twin Bridges will take one to these bench lands where, as far as the eye can see, fields of waving grain will meet the vision.

Old as is this section in the history of the state, the fact that there has been no attempt made to advertise it widely, accounts for the fact that it is not much better known. But this lack of advertisement does not mean that Madison County, in this particular section, is not fully up to the standard of other Montana valleys, for in every respect this section is agriculturally the equal of any section of Montana.

Twin Bridges itself is a bustling little western town with a population of a little over 600. In it are to be found excellent stores, a substantial bank, good auto and garage service, some fine homes, and the far-famed congenial western hospitality. With prospects of a main line of railroad to pass through it in the near future the town will evidence a decided advance in population and a sturdy growth will be begun which will undoubtedly make it one of the leading cities of southern Montana.

Its location is ideal for a town. Situated on the banks of the Beaverhead river, and at the junction of three rich valleys, it has to draw from those engaged in agriculture and ranching for its support, and from the products of the rich mines in the hills but a few miles to the east of the town. In Twin Bridges is located the State Home for Orphans which is ideally located on the west bank of the Beaverhead with graceful and attractive buildings, constructed by the bounty of the state of Montana.

To locate in this vicinity is to find a home in one of the state's garden spots.

[Signed] S. D. PARKER.

Belgrade, Montana,
March 28, 1916.

In 1909 I came to the Gallatin valley in search of health and a living, and found both. Nor has the climate merely proved healthful, but delightful, as well. However warm the days in summer, the nights are always cool, and the winters are far pleasanter than in our former home in Pittsburgh, Pa. I have spoken with many residents in the valley who came from as far south as Texas and Mississippi, and as far north as New York, and they are all agreed in that they prefer a Montana winter to a winter in their home states.

It is surprising how many farmers have moved from the Gallatin valley to other states east, west, north and south, and have returned to the valley convinced that here is the place of opportunity and healthful living far beyond what they could find elsewhere.

My farm was among the first homesteaded in the valley. For fifty years it was farmed without growing clover or any other grass. Part of it we have since had seeded to clover once; part twice, so that our yields are really poor. We are building up a dairy herd but the work has just begun and most of our cows just about pay their keep. But we can see clearly that by building up our herd and the fertility of the soil with legumes we can in a few years net from $5,000 to $6,000 a year on our farm of 240 acres of irrigated land, over and above all expenses of farming, except interest and our personal service of superintendence.

Here are some of our results from the farm of which only 160 acres were cropped. Received for rent in 1909, $2,100; in 1910, $1,650; farmed it in 1911 and made $4,700 gross in crops; 1915 netted us $2,700, which gives 6% on our equity of $25,000 invested and $1,200 for my own labor, but we can probably do twice as well.

We preferred staple farming, that is, we preferred to grow grain, hay and livestock. If there is a better county than this for this type of farming, we have not heard of it.

SUGAR BEETS AROUND BILLINGS—HUNTLEY

It is not our object to boom the price of land. We prefer to see prices down, because higher prices mean more taxes and we don't intend to sell. We really would like to buy, now that the prices are still low, for we want farm homes for our children. But for this we shall have to wait until we make more out of our farm.

[Signed] HENRY HARRER.

Bloomfield, Montana,
May 1, 1916.

I came to Bloomfield, Dawson County, Montana, in the spring of 1908, from Hancock County, Iowa, and took up a homestead of 160 acres. The first year I did not farm any, but just had a garden and broke up some prairie which I put in crop the following year. Have had several big crops and only one that I consider poor, that of 1910, but even then land that had been summer fallowed the previous year gave good returns. Have raised as high as 40 bushels of wheat; oats, 81 bushels; and flax 20 bushels to the acre. The lightest yield for wheat on summer fallow so far has been 18 bushels an acre. Have always raised plenty of potatoes and garden truck. This country has made wonderful changes since 1908, in the way of buildings, fences, roads, etc. We now have rural free delivery and prospects of telephone service soon. The climate is healthful and invigorating. Although the thermometer registers low here at times, the cold is not felt so much because the air is dry. Alfalfa grows finely here and in time will be one of our main forage crops. Corn can always be raised to make good stover or ensilage. Figuring a man's investment here in land and stock, and comparing it with the same investment in the East, his net income is considerably greater for this country. As the country develops, new railroads are forging their way through the country and we shall soon have adequate transportation facilities, and when that time comes Montana will rank as one of the first agricultural and stock states in the Union.

[Signed] A. H. OLLERMAN.

Helena, Montana,
April 1, 1916.

I was brought up on a farm in Illinois, spent twenty-eight years stock raising and ranching in Kansas, and have looked into all the farming sections of the country west of Ohio during the last thirty-five years, but have never been entirely satisfied since I left Illinois until I located here in Montana, which I did after making three prospecting trips into this state. Am now located in the Helena valley on 252 acres of unirrigated bench land.

Here things look right. Climate, soil and water suit me perfectly, and I have seen a powerful lot of these three things scattered over the country west of the Mississippi. I have two 8-horse teams at work this spring, and the sod ground I am turning up is so full of lime that a fistful of dirt leaves a white coating all over my hand. This is the sort of soil that gave 45 to 50 bushels of wheat to the acre all over this bench last year.

I have found on this Montana ranch wheat I have been looking for for a good many years, and my children will soon be on the way to settle on their own farms in this same valley.

[Signed] GEO. W. STAMBACK.

East Helena, Montana.
April 5, 1916.

I settled in Montana after I had traveled over several states looking for a location. Iowa is hard to beat, and I came from the best part of that state, but I do not want to go back. In fact, I sold my land there for nearly $200 an acre, and paid a little over $50 an acre for my 560 acres (partially improved) here. Believe me, this is a fact: if I could do so I would not trade acre for acre regardless of price, and go back. I like this country, climate, and crops better. I can make more money with less work, and there is a much bigger and better future for my boys here. This is a great country for a man with only a small amount of money to get started in.

[Signed] GEO. E. MILLER.

Twin Bridges, Montana,
April 10, 1916.

Four years ago, with my wife and five small children, I bought 400 acres of land six miles south of Twin Bridges in the Beaverhead valley. I know I have bettered my condition by locating here. Previous to settling in the Beaverhead valley, I had lived in Oregon, Washington and northern and southern Alberta. Montana, by virtue of experience, is my choice and the Beaverhead valley is where I expect to spend the rest of my days.

When I came to Madison County I brought some household goods, three horses and four cows and calves. The ranch I purchased was uncultivated and in the rough, but it looked good to me and I proceeded to take off my coat and buckle in. Now I have 160 acres under cultivation, all well irrigated, and to this I break up and add each year. I have built much fence around the land and have cross-fenced considerable of the ranch for hogs and cattle. I have erected a six room dwelling, large barn, milk house and many other outbuildings of a permanent character. I believe in the future of the dairy business in Madison County and to this end have worked to increase the number of my dairy cows. With my cows and young stock I now have 65 head. I have 15 head of good horses, 50 head of hogs and many fowls. With the fifteen head of cows I am now milking I use the proceeds to pay all household expenses and much of the upkeep expense of the farm. This valley is a splendid dairy country, and is well adapted to diversified farming. I have heavy yields of all crops—grain, vegetables, fruits and hay.

I paid $20 an acre for my land but could get $40 for it at any time, but even a larger offer would not be tempting to me for I like it here, am perfectly satisfied in every way, and expect to raise my children and pass my last days in this, the best country I have yet found.

It is not my intention to boast, but a ten thousand dollar offer would not be accepted for my profits during my residence here.

For those interested, there are yet homesteads to be had and much irrigated land, ranging in price from $20 to $50 an acre, the price depending upon the improvements made on the properties.

[Signed] WALTER WAGNER.

Lindsay, Montana,
April 26, 1916.

I came to Dawson County, Montana, in the fall of 1907, locating 25 miles west of Glendive. At that time it was strictly all sheep, cattle and horse ranching, not an acre being plowed between my place and town. Now almost every section is occupied. We now have a postoffice and store within one mile, daily mail, local and long distance telephone. I think this state the only place for the man of small means and equally good for the man with money. I came originally from Washington County, Iowa. I can winter cattle on less feed than in Iowa, due to more days of sunshine and no mud from fall till spring. In 1915, I raised over 2,800 bushels of wheat, over 600 bushels of oats, besides some corn, potatoes and 30 acres of alfalfa hay, and sold $800 worth of cattle, doing all my work with four horses. Montana is good enough for me and my place is not for sale.

[Signed] HENRY R. GREEN.

"Have View Ranch," Helena, Montana,
April 12, 1916.

Most of my life was spent in northern Illinois on a farm. Illinois is a good state, but there is no comparison from an agricultural standpoint; the climate is much nicer here also. Land is high priced there and needs building, with lime, phosphate, and fertilizer, while here all it needs is more good farmers to till the soil.

[Signed] O. H. MUNGER.

Bozeman, Montana,
May 1, 1916.

I came from Woodstock, Illinois, in the spring of 1912, having purchased an irrigated farm of two hundred and forty acres in the Gallatin valley, near Bozeman, Montana. I have farmed this land successfully for the last three years. My gross receipts each year have aggregated more than $5,000, to say nothing of receipts from one hundred and sixty hens and milk and butter

AN IRRIGATED APPLE ORCHARD WITH BEANS BETWEEN TREE ROWS, NEAR BILLINGS

from one and sometimes two cows. As to farming for real pleasure, it is the real thing when compared with methods used in the East.

The climate is almost perfect, from the standpoint of healthfulness. No tuberculosis here, unless imported, and even then this wonderful air will effect a cure in most cases.

Montana in general and Gallatin valley in particular are certainly hard to beat.

[Signed] D. S. EMERY.

April 10, 1916.

Myself and family lived in Nebraska for a good many years, and we had a farm there of several hundred acres, which we sold at a big price when we came to Montana. We are satisfied here, and you may believe that our letters to the home folks are full of the good things out here in land, crops, and especially climate. We are surprised enough at the Montana climate; everybody told us it was a cold country, but we find it a better climate than Nebraska. This western crop season is longer between spring and fall frosts. Yes, we like Montana.

[Signed] JAS. VOLLMER.

Helena, Montana,
April 12, 1916.

I came into Montana in 1915 after farming 28 years in states east of there. Spent my first year in Montana handling my neighbors' crops with a threshing outfit that I brought in with me, and I was surprised and delighted to find what the yields amounted to on all sides of my new land. Dry bench lands to the north of me yielded 53½ bushels Turkey Red Winter wheat and 36 bushels macaroni spring wheat. Threshed a pile of oats, too, for the folks on the south side, and they got 55 to 60 bushels to the acre from their dry land.

The climate here strikes me as far ahead of that to the eastward, and I am very much pleased with the country so far; in fact, I can see some mighty good years ahead out here.

[Signed] C. COLBENSON.

Glendive, Montana,
May 5, 1916.

I came to Montana in the fall of 1909 and located on a homestead 35 miles north of Glendive. There was scarcely any farming done in that locality at that time. Now there is about 2,900

acres under plow in the township where I took my land. Conditions are generally the same all over Dawson County. One could have bought these lands six years ago for from $5 to $10 an acre. They are now selling for from $25 to $35 an acre. We now have a daily mail, whereas six years ago we got our mail in Glendive, 35 miles distant. We have churches and good schools. We are also getting good roads, 72 miles being graded last year. What we need now is a railroad to haul out the grain that is being raised here. I. L. Jones, of Bloomfield, raised 9,860 bushels of grain last year. Miles J. Bontrager, of Bloomfield, raised 9,000 bushels. There are many others that raised from 5,000 to 6,000 bushels.

I do not think there is a state that will equal Montana for grain and stock raising. I have lived in Iowa and Nebraska nearly all my life and I know I can raise stock in Montana for about one-half what it costs in Iowa or Nebraska. Hogs do well here. This is a great country for a man with small means to get a start, and equally good for the man with money. I know of several families who came here five years ago with scarcely enough to get here. If they were now to sell their land they could walk out with $10,000 in cash. That is not bad for five years work.

[Signed] L. G. Kinch.

Helena, Montana,
April 21, 1916.

On a recent trip from coast to coast, made with the view of locating in the West, I have found general farming conditions here just a little more promising than in any other state visited.

In the way of soil, climate, crop yields, shipping facilities and markets, Montana conditions are all that could be desired. The soil is exceptionally rich in all the essential elements necessary to vigorous and abundant plant growth—lime, phosphates, potash and nitrogen.

I have made a deliberate and careful survey of the factors entering into agricultural prosperity in some thirty states of the Union, with the result that I have finally come into Montana to make my home and continue my work of farm management.

[Signed] Samuel M. Weekes.

Twin Bridges, Montana,
March 22, 1916.

The mining situation in Madison County, especially in the vicinity of the town of Twin Bridges, is such that it must be said to be still in its infancy. Since early days the hills of the Tobacco Root range have been pretty well covered by the prospector, but any indications of metal have, for the most part, remained such because of lack of available capital to work the properties. But during the latter part of the year 1915, and in the spring of 1916, the development of mining properties in this range became exceedingly active.

That metals abound in these hills, and that in large quantities, is not questioned. But as has been said, the requisite capital for their development has been lacking. Gold, silver, lead, zinc and copper—the latter both high and low grade—have been found in sufficient quantities to warrant the development of the properties already patented and those already being represented. From several properties, regular shipments of ore have been made to the smelters at Helena and Anaconda, and the returns from these shipments have netted the owners considerable money.

Already a company has been formed to mine some of the copper properties in this region and many men have been employed to take out the ore. From prospects made and assays returned from the respective assay offices, the ore obtained is of such grade and is present in such quantities, that the prediction has already been made that the copper mines of the Tobacco Root district will some day take the place of the famous Butte hill.

The future of mining in this vicinity is exceptionally bright, and fortunes for those who are working at the properties are already in the making.

[Signed] M. R. Ostronich.

Columbus, Montana,
September 14, 1915.

The longer we are here the better we like the "Lake Basin country" of Montana.

I learned about this dry farm land country near Columbus, about 50 miles west of Billings, and went to see it, and I must confess right here the Northern Pacific Railway Company has not said too much about this country in describing it in their folders. The free homesteads were all taken long ago. Nevertheless, lands in this district are yet low priced and guarantee the farmer or investor a much bigger and quicker profit on his money and labor than any other farming land I know of in any other state of the Union. These lands have been pastured by great cattle and sheep herds for many, many years and are very fertile. The soil is a dark brown loam, easy to work, no gumbo nor alkali. The wild grass grows from one to three feet high, and we cut big stacks of fine hay on our unbroken land. On my first new breaking, I raised this year 60 bushels of oats and 40 bushels of macaroni spring wheat to the acre. My neighbors, on their older lands that had been farmed for three or more years, and the older decayed sod, produced a good deal more, some as high as 54 bushels of wheat and 75 bushels of oats to an acre. This is not an exceptional year in large crops, but such as these have been raised here every year by the free homesteaders for the last seven years. Crop failure is unknown in this section of Montana for the reason that we are located right in the center of the "rain belt" between the great Beartooth mountains on the south, the Crazy mountains on the west, the Big Snowy mountains on the north and the Prior mountains on the east of us.

We never have any desire here for irrigation, and not only the finest wheat, oats, barley and flax grow here abundantly, but also very fine potatoes, peas, beans, vegetables of all kinds,

THRESHING "DRY LAND" WHEAT IN MONTANA

and even corn. Last, but not least, alfalfa does very well here also. One of my neighbors produced three cuttings of good alfalfa hay on his "dry land" farm this year, yielding five tons an acre, and another neighbor here netted $75 an acre from a five acre patch of seed alfalfa.

I paid only $22 an acre here. This was, of course, for land without improvements. Our climate is also very healthful and very moderate—very few days without sunshine. The nights are always cool in summer and the winters are mild and pleasant. Stock needs very little shelter and feeding in the barn.

This country is yet in its "baby shoes." I only wish that my old friends from Iowa and Missouri would come up and see this Columbus country once, see what we can raise here on this land and what a great future we have before us. I honestly believe they would at once make their homes here too. . There are people from almost every state in the Union, but I do not know one who would sell out and go back to his former home in the East. Since we have lived here about 200 families have moved out here and everyone is feeling satisfied, and the land is fast increasing in price. As a grain raising country, I do not know any other section in the United States more productive or favorable than this Lake Basin country, and it certainly deserves its name, "The Great Wheat Belt of Montana," and this will be much more so after all the yet unoccupied lands are settled and farmed.

I would like to especially direct all the German farmers to this country north of Columbus, for I know they will make good here and find permanent homes where satisfaction resides.

[Signed] Rev. JOHANNES C. JAECH,
Columbus, Montana.

STATE HISTORICAL SOCIETY OF NORTH DAKOTA.

From the Minneapolis Journal of September 7, 1916:

Fancy Wheat Sells at Top Price
$1.72

Car of Montana No. 1 Hard Makes Record on Chamber of Commerce.

"What is believed to be the highest price ever paid for wheat in Minneapolis was recorded late yesterday when the Woodward-Newhouse Company, Chamber of Commerce, sold a car of Montana new crop No. 1 hard spring wheat to John McLeod at $1.72 a bushel.

"The wheat was raised near Joliet, Montana, and was brought in by the Northern Pacific road. It commanded a premium of 10 cents over ruling prices, owing to the scarcity of No. 1 hard, the high quality of the lot and the likelihood of a scarcity of good seed wheat for the next crop year."

The Agricultural Exhibit Room of the Northern Pacific Railway 5th and Jackson Streets, St. Paul, Minn.

THE Northern Pacific Railway has installed in its new general office building, at Fifth and Jackson Streets, St. Paul, a large and complete exhibit of the various and diversified products of the territory contiguous to its line from the Great Lakes to the Pacific Ocean. Practically every state and county, and almost every tributary neighborhood is represented.

The exhibit is very attractively arranged and is decidedly educational, because of its comprehensive character. It would be an inspiration to all lovers and boosters of the Northwest to see this wonderful display. There are over 1,400 separate articles on exhibition.

In the grain display there are splendid specimens of different varieties of corn from all the Northern Pacific states—Wisconsin, Minnesota, North Dakota, Montana, Idaho, Washington and Oregon, besides several specimens of rye, oats, alfalfa, timothy and soudan grass.

Among the jars of processed fruit and vegetables, are apples and onions weighing about 1½ pounds each, potatoes weighing about 5 pounds each.

There are several jars of roses in which the rose, the leaves, and the stem are all preserved in their natural colors and beauty.

In the picture section there are several characteristic paintings ranging from 9x11 and 9x16 to 9x20 feet in size, and representing varied and distinctive farm scenes in all the Northern Pacific states.

Any one interested in the agricultural or other possibilities of the Northwest and visiting St. Paul, will miss a treat if he fails to spend at least a couple of hours in this free exhibit of the Northern Pacific. It has taken months of patient work and considerable expense to assemble this rare collection, and the General Office Building of the Northern Pacific Railway, where it is found, is but three blocks from the depot.

L. J. BRICKER, General Immigration Agent, St. Paul, Minn.

When You Ship

Household Goods, Farm Implements or Merchandise of any kind, either car load or less than car load lots

To Any Point in the Northwest

Route your shipments via the line furnishing the fast through express freight service with through merchandise package daily—the

Northern Pacific Railway

to Minnesota, Manitoba, North Dakota, Montana, Idaho, Washington, Oregon, British Columbia.

For particulars regarding freight shipments address nearest representative, shown on third cover page of this book, or

J. B. BAIRD,
Freight Traffic Manager,
St. Paul, Minn.

J. G. WOODWORTH,
Second Vice-President,
St. Paul, Minn.

HENRY BLAKELEY,
Gen'l Freight Agent,
St. Paul, Minn.

Northern Pacific Passenger Service

The Northern Pacific Railway operates several daily through electric-lighted transcontinental passenger trains, including TWO DAILY THROUGH TRAINS between Chicago and Portland and Puget Sound, and one between Kansas City-St. Louis and the North Pacific Coast. One through train from and to Chicago is operated over the Burlington Route between Chicago and St. Paul, and one over the Chicago & North Western Line. The through train from and to Kansas City and St. Louis is operated over the Burlington Route between St. Louis and Billings.

All through trains carry Pullman, Standard and Tourist sleeping cars, coaches and dining cars. All meals are served a la carte. Our dining car service is noted and known as the "Route of the Great Big Baked Potato." Conveniently connecting day and night trains are operated between Duluth-Superior and Staples, Minn. There are three high class trains operated between St. Paul-Minneapolis and Duluth-Superior. Daily service between St. Paul-Minneapolis and points in Northern Minnesota as far north as Kelliher and a daily service between St. Paul-Minneapolis and International Falls. Daily service between St. Paul-Minneapolis and Winnipeg, Man. In addition to our through service, numerous local trains are maintained between commercial centers in the states served by our lines. Take it all in all, our service is arranged for the maximum of convenience to the traveling public.

Our through trains connect with affiliated lines entering the states of Washington and central Oregon; also connecting with the Great Northern Pacific Steamship Line, which has established a new coastwise service between Astoria, Ore., and San Francisco, Cal. The following is a list of publications issued by the Passenger Department of this road and will be found of interest to the tourist, traveler and pleasure seeker.

List of Publications

Of Interest to the Tourist, Traveler and Pleasure-Seeker, Issued by the Northern Pacific Railway

NORTHERN PACIFIC PLAYING CARDS 20 cents per pack, 25 cents on trains and in Canada.		
WONDERLAND SERIES POSTER STAMPS		Free
YELLOWSTONE PARK FOLDER		Free
LAND OF GEYSERS		Free
YELLOWSTONE NATIONAL PARK, U. S. Government book		Free
RAINIER NATIONAL PARK, U. S. Government book		Free
CRATER LAKE NATIONAL PARK, U. S. Government book		Free
SPOKANE AND THE INLAND EMPIRE		Free
PUGET SOUND AND ALASKA		Free
ALASKA CIRCULAR		Free
PORTLAND AND COLUMBIA RIVER		Free
SUMMER TOURS TO NORTH PACIFIC COAST		Free
OUTINGS AT THE SEASHORE (PACIFIC)		Free
EASTWARD THROUGH THE STORIED NORTHWEST		Free
PANORAMIC YELLOWSTONE PARK PICTURE		Free
DINING CAR SERVICE LEAFLET		Free
TOURIST SLEEPING CAR PAMPHLET		Free
MINNESOTA LAKES		Free
HUNTER'S HOT SPRINGS		Free
ALONG THE SCENIC HIGHWAY		Free
GREAT BIG BAKED POTATO	GRIP TAGS	Ten Cents
	SPOONS	Twenty-five Cents
	PENNANTS	Thirty-five Cents
	PAPER WEIGHTS	Fifty Cents
	INK STANDS	One Dollar

For information about train service or tickets or any of the publications mentioned in the foregoing, write to
A. M. CLELAND, General Passenger Agent, ST. PAUL, MINN.

Publication No. 17

List of Other Publications

Of Interest to the Homeseeker, Settler and Investor
Issued by the Northern Pacific Railway

Lower Yellowstone Project Pamphlet, No. 10—An illustrated folder, giving full description of the lands under the project and how they may be obtained for settlement.

Farming and Fruit Growing in Montana, No. 12—A sixteen-page folder containing seven interesting letters from the agricultural expert, Prof. Thos. Shaw. Each letter describes a different section of Montana, tells what it is best suited for, the abundant crops which may be raised, etc.

What Montana has to Offer, No. 13—A map folder showing in general the resources and opportunities open to homeseekers in Montana. The map is a large one, in three colors, and the pamphlet is a valuable one.

North Dakota, No. 14—A sixty-four-page illustrated booklet describing lands and conditions in the counties of North Dakota.

Washington and Northern Idaho, No. 15—A booklet descriptive of the country and counties of Washington and the Pan Handle of Idaho—"The Inland Empire."

Opportunities, No. 16—A book of valuable information relative to Business and Industrial Openings along the Northern Pacific Railway.

List of Land Dealers, No. 18—A pamphlet containing a list of land dealers located along the line of the Northern Pacific, containing carefully compiled information of special use to Homeseekers.

U. S. Government Land Pamphlet, No. 19—Contains tabulated list of vacant public land tributary to the Northern Pacific in the various states.

Suggestions to the Dry Farmer, No. 80—A valuable pamphlet setting forth complete directions for the successful cultivation of soil by the so-called "dry farming" system. Prepared by Messrs. Alfred Atkinson, Agronomist, and F. S. Cooley, Superintendent of Farmers' Institutes, of the Montana Agricultural College.

Minnesota, No. 86—An illustrated publication in large type describing more particularly northern Minnesota, where there are many desirable openings for good farmers.

Through the Fertile Northwest, No. 87—A well illustrated map folder descriptive of the territory adjacent to the Northern Pacific Ry. from St. Paul-Minneapolis to the Pacific Coast.

Kittitas Valley, Washington, No. 91—Containing map with full descriptions. Very valuable to those interested.

Oregon for the Homeseeker, No. 94—A forty-page illustrated booklet descriptive of the Columbia Valley, Willamette Valley and western Oregon. The contents are in the form of separate articles by agricultural experts.

Gallatin Valley, Montana, No. 96—An illustrated folder describing this fertile garden spot, of which Bozeman is the center. Wonderful yields of grains, grasses and vegetables.

Yakima Irrigation Project Pamphlet—An illustrated pamphlet descriptive of the irrigated lands under this project; how they may be obtained, etc.

Special Publications—Consisting of pamphlets, leaflets, etc., issued by various irrigation and land interests descriptive of the country tributary to the Northern Pacific.

Any of these pamphlets sent FREE

After Reading this Publication, if You Desire Further Information Regarding North Dakota or any of the Northern Pacific States, Say What Locality Interests You and

WRITE TO

L. J. BRICKER, General Immigration Agent, ST. PAUL, MINN.

List of Representatives

For passenger fares, freight rates, etc., address any of the following representatives of the Northern Pacific Railway:

GENERAL AND TRAVELING PASSENGER, IMMIGRATION AND FREIGHT AGENTS

ABERDEEN, WASH.—305 South H Street
H. H. Griffin — General Agent

BELLINGHAM, WASH.—1306 Dock Street
A. N. Bussing — General Agent

BILLINGS, MONT.—Mont. Ave. and 28th St.
J. E. Spurling — General Agent

BOSTON, MASS.—207 Old South Building
C. E. Foster — District Passenger Agent
F. W. Clemson — New England Freight Agent

BUFFALO, N. Y.—215 Ellicott Square
Wm. G. Mason — District Passenger Agent
M. O. Barnard — Gen'l Agt., Freight Dept.

BUTTE, MONT.—N. W. Cor. Park and Main Sts.
W. H. Merriman — Div. Frt. and Pass. Agent

CHICAGO, ILL.—144 South Clark Street
A. C. Odenbaugh — Gen. Agent, Pass. Dept.
J. C. Thompson — District Passenger Agent
C. B. Sexton — Gen. Agent, Freight Dept.
J. L. Daugherty — Trav. Immigration Agent
Jno. F. Fox — Trav. Immigration Agent

CINCINNATI, OHIO—40 East Fourth Street
J. C. Eaton — Gen. Agent, Pass. Dept.
A. H. Caffee — Gen. Agent, Freight Dept.
G. A. Jobes — Trav. Immigration Agent

CLEVELAND, OHIO—Williamson Bldg.
B. A. Hamilton — Gen. Agent, Freight Dept.
C. E. Brison — District Passenger Agent

DES MOINES, IA.—511 Citizens Nat. Bank Bldg.
E. D. Rockwell — District Passenger Agent

DETROIT, MICH.—Room 423 Majestic Bldg.
A. E. Ryan — District Passenger Agent
Geo. Barnes — Gen. Agent, Freight Dept.

DULUTH, MINN.—334 West Superior Street
J. I. Thomas — General Agent
C. P. O'Donnell — City Passenger Agent

EVERETT, WASH.—2825 Colby Avenue
C. O. Martin — General Agent

HELENA, MONT.—Main and Grand Streets
E. S. Richards — General Agent

INDIANAPOLIS, IND.—524 Merch. Bank Bldg.
R. B. Dickson — Traveling Passenger Agent

JAMESTOWN, N. D.—Station
Wm. T. Kraft — General Agent

KANSAS CITY, MO.—217 Railway Exchange Building, Walnut Street
J. L. Moore — Gen. Agent, Pass. Dept.
F. A. Acker — Gen. Agent, Freight Dept.
O. L. Stark — Trav. Immigration Agent
A. C. Wunderlich — Trav. Immigration Agent

LEWISTON, IDAHA—202-3 Davies Block
W. J. Jordan — General Agent

LOS ANGELES, CAL.—636 So. Spring Street
W. E. Swain — General Agent

MILES CITY, MONT.—Station
Chas. Mitchell — Traveling Freight Agent

MILWAUKEE, WIS.—375 Broadway
Harry V. Wilmot — District Passenger Agent
J. C. McCutchen — Gen. Agent, Freight Dept.

MINNEAPOLIS, MINN.—First National Bank Bldg., 507 Marquette Avenue
G. F. McNeill — City Passenger Agent

MINNEAPOLIS, MINN.—Metropolitan Life Bldg.
J. C. Simonton — Gen. Agent, Freight Dept.

MONTREAL, QUE.—Imperial Bank Bldg., St. James St.
Tracy Howard — Dist. Freight and Pass. Agent

NEW YORK CITY—1244 Broadway
W. F. Mershon — Gen. Agent, Pass. Dept.

NEW YORK CITY—1460 Woolworth Bldg., 233 Broadway
C. F. Seeger — Gen. Agent, Freight Dept.

NORTH YAKIMA, WASH.—Station
H. A. Glen — General Agent

PHILADELPHIA, PA.—711 Chestnut Street
P. W. Pummill — District Passenger Agent
John S. Donal — Gen. Agent, Freight Dept.

PITTSBURGH, PA.—208 Park Bldg.
C. E. Brison — District Passenger Agent
W. W. Scully — Gen. Agent, Freight Dept.

PORTLAND, ORE.—407 Worcester Building
W. H. Ormsby — Traveling Freight Agent
W. H. Jaynes — Soliciting Freight Agent
A. F. Harvey — Soliciting Freight Agent
A. J. McClusky — Soliciting Freight Agent

PORTLAND, ORE.—255 Morrison Street
L. E. Beach — City Passenger Agent
S. J. Miller — Traveling Passenger Agent
F. R. Ritchie — Traveling Passenger Agent

PORT TOWNSEND, WASH.—402 Water Street
W. J. Daly — Agent

SAN FRANCISCO, CAL.—685 Market Street
T. K. Stateler — General Agent, Pass. Dept.

SEATTLE, WASH.—Smith Bldg., Corner Second Avenue and Yesler Way
J. O. McMullen — City Passenger Agent

SPOKANE, WASH.—Sprague Ave. and Wall St.
C. R. Lonergan — General Agent
W. H. Ude — City Passenger Agent
C. E. Arney — Western Immigration and Industrial Agent

ST. LOUIS, MO.—306 Central Nat. Bank Bldg.
D. B. Gardner — District Passenger Agent
R. K. Cross — Gen. Agent, Freight Dept.

ST. PAUL, MINN.—363 Robert St., Corner Fifth
J. D. Zook — City Passenger Agent

ST. PAUL, MINN.—Railroad Building, Fifth and Jackson Streets
L. P. Gellerman — District Passenger Agent
J. T. McKenney — District Passenger Agent
W. A. Cleland — Division Freight Agent
W. M. Burk — Contracting Freight Agent
H. K. Cole — Contracting Freight Agent

SUPERIOR, WIS.—1010 Tower Avenue
A. C. Albachten — Agent
J. E. Pederson — City Passenger Agent

TACOMA, WASH.—925 Pacific Avenue
C. B. Foster — City Passenger Agent
D. H. Rowan — Gen. Agent, Freight Dept.

VANCOUVER, B. C.—Dominion Building, 207 Hastings Street West
H. Swinford — General Agent

VANCOUVER, WASH.—512 Main Street
S. J. Miller — Traveling Passenger Agent

VICTORIA, B. C.—1234 Government Street
E. E. Blackwood — General Agent

WALLACE IDAHO—Station
C. M. Grubbs — General Agent

WALLA WALLA, WASH.—Station
S. B. Calderhead — General Agent

WINNIPEG, MAN.—268 Portage Avenue
W. C. Hartnett — General Agent

GENERAL OFFICE

ST. PAUL, MINN. Fifth and Jackson

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PASSENGER DEPARTMENT

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A. D. CHARLTON — Ass't General Passenger Agent — Portland, Ore.

PASSENGER DEPARTMENT

JOHN C. POORE — Ass't General Passenger Agent — St. Paul, Minn.
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E. E. NELSON — Ass't General Passenger Agent — St. Paul, Minn.
A. TINLING — Ass't Gen. Freight and Pass. Agent — Seattle, Wash.
L. J. BRICKER — General Immigration Agent — St. Paul, Minn.

FREIGHT DEPARTMENT

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H. BLAKELEY — General Freight Agent — St. Paul, Minn.
H. E. STILL — General Western Freight Agent — Tacoma, Wash.
G. A. MITCHELL — Ass't General Freight Agent — St. Paul, Minn.
W. E. ALAIR — Ass't General Freight Agent — St. Paul, Minn.
F. H. FOGARTY — Ass't General Freight Agent — Portland, Ore.
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S. J. HENRY — Ass't Gen. Western Freight Agent — Tacoma, Wash.
L. R. CAPRON — Ass't Gen. Freight Agent — St. Paul, Minn.
J. L. BURNHAM — Ass't Gen. Freight Agent — St. Paul, Minn.
A. J. DAVIES — Live Stock Agent — St. Paul, Minn.
W. H. MERRIMAN — Div. Freight and Pass. Agent — Butte, Mont.
G. R. MERRITT — Gen. Agent, Refrig. Service — St. Paul, Minn.

MONTANA

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